SELECTIONS FROM THE RECORDS

OF THE

MADRAS GOVERNMENT.

Published by Authority.

No. XLIII.

CORRESPONDENCE

ON

THE SCALE OF PASSENGER FARES

AND

GOODS TARIFF,

FOR

THE MADRAS RAILWAY.

VOL. II.

MADRAS:
PRINTED BY H. SMITH, AT THE FORT SAINT GEORGE GAZETTE PRESS.
1857.

ERRATA.

Page 3.—Para 13.—For "as near possible"—Read—"as near as possible."

Page 17.—Para 75.—clause 3rd—For "articles produced"—Read—"articles produced.'

Page 19.—Page 91.—For "who would have frowarded"—Read—"who would have forwarded."

Page 23.—Para 117.—For "to accompany his Coods"—Read—"to accompany his Goods."

Page 26.—Para 143.—For "than they are present"—Read—"than they are at present."

Page 31.—third line—For "Goods and Live stocks"—Read—"Goods and Live Stock."

Page 43.—Para 20.—For "none, as a rule, but the wealthier classes"—Read—"None as a rule—None but" &c.

Page 54.—Para 92.—For "but Jagree with Mr. Fletcher"—Read—"I agree with" &c.

Page 61.—Note to Para 139—For—"Merchants creating screws"—Read—"Merchants erecting screws."

Page 66.—Proposed classification of goods—For—"Bank for Tanning"—Read—"Bark for Tanning."

Page 67.—For "Ice in water tight case"—Read—"Ice in water tight cases."

Page 72.—For "Mileage (2nd Class) 15,323"—Read "Mileage (2nd Class) 15,023."

Page 86.—For "Average weight of train gross—Maunds 557·8"—Read—"Average weight of train gross—Maunds 5578."

Page 95.—For "To Lieut. T. T. Pears, C. B." Read—"To Lieut. Colonel T. T. Pears, C. B."

Page 110—For "they could carry (2 Tons 16 Maunds") Read—"they could carry (2 Tons 16 (Cwt.)."

Note to Appendix A. Page 78—For—"of which some one third"—Read—"of which sum one third."

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FINANCIAL RAILWAY DEPARTMENT.

No. 326.

To THE SECRETARY TO THE GOVERNMENT OF INDIA,

Public Works Department.

SIR,

With reference to your letter 23d May last, No. 2322, I am directed by the Right Honorable the Governor in Council to report, for the information of the Government of India, the further proceedings of this Government on the subject of the passenger fares and Goods charges on the Madras Railway.

2. In accordance with the instructions conveyed in your letter, tables of fares for Passengers and of rates for Goods were prepared by the Consulting Engineer, in communication with the Railway Agent and Manager, submitted to this Government and received their sanction on the 12th and 23rd June last.

3. These tables will be found, as Entries A and D, in the Appendix to the accompanying Volume. The passenger fares are those approved by the Supreme Government. The principle on which the charges for goods have been regulated will be seen from Colonel Pears' papers, as per margin.

To Railway Agent 7th June 1856, No. 287. Observations 21st June 1856, No. 123, pages 122 and 123.

4. These Rates have been declared to be Experimental and in force for one year only, at the Expiration of which period they will be open to revision.

The passenger table, you will observe, does not include a fourth or slow class train. The reason for the omission will be found in pages 136 to 147 of the volume. Under the instructions contained in the Honourable Court's despatch of 21st May 1856, Financial Railway Department, No 13, the Madras Government have deemed it proper to suspend the introduction of the fourth class until the further pleasure of the Court can be known; but, as will be seen from their letter of the 8th July, No. 9 of 1856, paras 58 and 59, they have strongly urged on the Honorable Court the necessity of having a cheap train of the class in question.

Page 136.

6. The Correspondence, that has passed on the subject of the Madras Railway fares and rates, has been collected and printed, and I am desired to transmit 10 copies for the use of your Department. I am, at the same time, to explain that, as the questions to which it relates are not yet finally settled, the volume has not been published nor distributed, nor does it form a number of the Government Selections. It has simply been got up for the use of the Government Office and of the Consulting Engineer—copies being also supplied to the Supreme Government and forwarded to the Honorable Court of Directors.

I have, &c.,

(Signed) T. PYCROFT,

Chief Secretary.

Fort Saint George, 2nd October 1856.

NOTE—This letter should have been printed at Page 73, of the 2nd series, of the Correspondence.

RAILWAY DEPARTMENT,
CONSULTING ENGINEER'S OFFICE.

No. 271.

TO MAJOR T. A. JENKINS,
Agent and Manager of the Madras Railway Company.

SIR,

The present Scale of Fares on your Railway having been declared experimental, the Government are desirous of being placed in a position to re-consider it before the 1st of July next. They do not doubt but that the result of your traffic operations, up to the present time, will throw some further light on the question, and I am directed to request you will be good enough to forward a revised list of goods with your present views on the Classification, and that you will state whether your opinion, as expressed in former reports on the subject of Rates for Passengers and Goods, have undergone any change, and, if so, what rates you would propose to establish from and after the 1st of July next.

The Government request that your reply may be submitted on, or before, the 1st Proximo.

I have the honor, &c.,
(Signed) T. T. PEARS,
Consulting Engineer for Railways.

Madras, 18th March 1857.

MADRAS RAILWAY,
MADRAS, 22ND MAY 1857.

No. 437.

FROM MAJOR T. A. JENKINS,
Agent and Manager.

TO LIEUT. COL. T. T. PEARS, C. B.,
Consulting Engineer.

SIR,

Agreeably to the request conveyed in your letter, No. 271, dated the 18th March last, I have the honor to forward to you, for submission to the Government, a Report from the Traffic Manager of this Company upon the working of the Traffic during the past ten months, and such charges in the Rates and Fares, and Classification of Goods, as his experience leads him to propose.

2. In submitting this Report, I beg it may be understood that the Rates and Fares are not such as this Company would recommend for adoption as a final arrangement. The Public having, since the Line has been opened for traffic, been accustomed to rates extremely low, it is not deemed expedient to make a very marked change in the rates, by now substituting for adoption those previously proposed by the Traffic Manager in his letter, No. 35, dated 29th December 1855, but rather to amend the fault of very low rates by degrees.

3. Our experience, in the working of this line for the last ten months, has shown us that extremly low fares are in themselves not sufficient to ensure to the Railway the conveyance of all the traffic of the District to it; and it is confidently believed that an equal quantity of Goods would have been conveyed had our rates been higher.

4. The objects, it appears to me, to be kept in view, are facilities and accommodation; with these the Traffic would increase day by day, without them our operations must continue to be restricted. Facilities should be afforded to the Public, as I have in previous communications brought to the notice of the Government, to leave Madras in the morning and to return the same day; the necessity for such arrangement was remarked upon by the Chamber of Commerce, and is called for by the unanimous voice of the Public. It has been proposed to afford this accommodation without any great additional cost, by the running of mixed trains. The Board of Directors of this Company, as you are aware, in their letters to my address, have approved of the running of such trains; and the sentiments so conveyed, I need not inform you, have the concurrence of the Honorable the Court of Directors and of the Board of Control; I therefore beg again to solicit the Government to re-consider this very important question, and to authorize the running of mixed trains.

5. The receipt and delivery of Goods have also been the subject of serious consideration; the question is now before the Board of Directors, with the view to this Company undertaking the conveyance of Goods from the warehouse of the consigner to that of the consignee.

6. The standard weight, the Indian Maund, ordered to be used on this Railway, is the source of constant reference and of difficulties to the Native Trader, I would beg strongly to recommend that we be allowed to transact our business as we may find the most desirable. In respect to statistical statements for the information of the Government, I beg to state that they can be prepared in any denomination of weight that may be ordered. I would adduce the Great Indian Peninsular Railway's "Time and Rate Table," given in Tons, in support of my recommendation

that our standard weight should not be Maunds. The terminal charge has also been found to be objectionable; in the preparation of the present rates such charges have been omitted.

7. The alterations I proposed in the Rates and Fares are, I may briefly state, the reduction of the 2nd Class Fare from 9 pies to 7 pies per mile, and the raising of the 3rd Class Fare from 4 pies to 5 pies, as recommended by the Board of Directors. The 1st Class fare remaining as at present.

8. It is also proposed, to meet a difficulty in booking the numerous travellers at Trivellore on occasions of festivals, which cause the detention of the Trains, that return Tickets be granted, on such occasions, at one Rupee each for the double journey. A considerable reduction is proposed in the parcel rates.

9. The rates for Horses, Carriages, and Dogs, it is proposed to leave unchanged.

10. In the Goods it is proposed to alter the classification, but not to make any great changes in the rates.

11. The first Class will be at 8 pies the Ton per mile, *including terminal* charges; in this class will be salt and such goods as are not liable to damage from exposure to weather, and the rate is as near as possible to that now in use.

12. A 2nd Class is proposed to be introduced, at 10 pies per ton per mile; in this class will be those goods now in the 1st Class other than the above, and a few others.

13. The 3rd Class is at 15 pies the ton per mile, as near possible to our present 2nd Class rate.

14. The 4th Class, at 24 pies per ton per mile, also as near as can be to our present 3rd Class rate, including terminal charge.

15. Thus it will be seen we propose to carry—

In the 1st Class 300 lbs one mile for 1 pie = $\frac{1}{12}$ of an Anna.

2nd	240	do.
3rd	160	do.
4th	100	do.

Or—

1st 9 tons or 245 maunds	@ 8 pies pr. ton	=	6 as.	the mile.
2nd do.	@ 10 ,, ,,	=	7·6	,,
3rd do.	@ 15 ,, ,,	=	11·3	,,
4th do.	@ 24 ,, ,,	=	18·	,,

Or –

1st	1 maund at	·292 of a pie per mile.	
2nd	do.	·371	do.
3rd	do.	·555	do.
4th	do.	·881	do.

16. I request that you will move the Government to authorize the adoption by this Railway of the Rates and Fares, from the 1st July next, as above set forth.

I have, &c.,
(Signed) T. A. JENKINS,
Agent and Manager.

Despatched 27th May, 1857.

MADRAS RAILWAY,
TRAFFIC MANAGER'S OFFICE,
21ST MAY 1857.

No. 31.

FROM H. A. FLETCHER, ESQ.
Traffic Manager.

TO MAJOR T. A. JENKINS,
Agent and Manager Madras Railway.

SIR,

I have had the honor to receive your letter, No. 44 of the 19th March, forwarding letter, No. 271, from the ConsultingEngineer forRailways, dated the 18th idem, requesting that you will furnish " a revised " list of Goods, with your present views on the classification, and that you " will state whether your opinions, as expressed in former reports, on " the subject of Rates for Passengers and Goods, have undergone any " change, and if so, what Rates you would propose to establish from " and after the 1st July next."

2. I have now the honor to submit No. 1, a Time and Fare Table, showing the times and number of Trains which I think should be run upon this Railway, as well as the Fares for Passengers and Rates for Parcels, Luggage, Horses, Carriages, and Dogs. I also submit No. 2, a classification of and Rates for Goods, which I would recommend for adoption—both to come into operation on the 1st July next.

3. In submitting these Rates and Fares and proposed time of trains, I beg to offer the following observations for your consideration.

4. With reference to the observation, para 1 of the Consulting

Engineer's letter, No. 271, that "They (the Government) do not doubt, "but that the result of your Traffic operations, up to the present time, "will throw some further light upon the question," I have the honor to observe that I conceive it is very difficult indeed to draw any sound or satisfactory result from the operations upon this Railway, either in the coaching or goods traffic, up to the present time, based as these operations have been, as it appears to me, upon no sound principle.

5. My opinions in this respect are founded, as regards the coaching Traffic, comprising Passengers, Parcels, Luggage, Horses, Carriages and Dogs:

First. Upon the unsatisfactory arrangement of the Trains running upon the Railway, their number, and time of starting.

Second. Upon the great difference in the Fares charged for the respective classes of Passengers; the Second Class being more than double the rate of the Third, and the First Class double the rate charged for the second, and more than four times that charged for the Third Class, whilst all classes of Passengers alike travel by the same Train.

Third. Upon the very high and prohibitory rate for Parcels.

6. I may here mention, as comprising the remaining items of Coaching Traffic, that I consider the rates charged for Passengers, Luggage, Horses, Carriages, and Dogs, as being satisfactory.

7. As regards the first point, viz. the unsatisfactory arrangement of the Trains running upon the Railway, their number and time of starting.

8. In my letter, No. 35, of the 29th December 1855, I expressed an opinion that not less than two Trains each way should be run upon the Railway, so that the same accommodation might be afforded to those who required to travel Eastward as well as to those who required to travel Westward.

9. So far from these views having been acted upon, there has been only half the accommodation afforded to those travelling Eastward, by a Train which left the Western Terminus at a most inconvenient hour, viz. 5-30 A.M., for the first 6 months from the opening of the line, which, on its return, arrived at the same Terminus so late in the evening as to render a journey undertaken under such circumstances most inconvenient.

10. I consider therefore that the Passenger Traffic Eastward has met with no sufficient encouragement by the arrangement of the Trains; whilst the Passenger Traffic Westward has been, if possible, in a far worse position, from the fact that no person could travel upon the line in a Westerly direction and return upon the same day.

11. As regards Passengers from the Western end of the line, it may be fair to assume that some would find it an accommodation to return on the same day, whilst others would wish to remain in Madras the whole of the day, and return on the following morning. I have no doubt the latter predominate over the former ; a Train therefore from the Western Terminus leaving at 5-30 A. M. or 6-30 A. M., arriving in Madras at 8-45 or 9-45, or as at present 10-30 A., M. and leaving Madras at 3-30 P. M., as at present, whilst it accommodates the few, compels the many to remain in Madras until 3-0 P. M. of the following day, by which the whole of two days are occupied in the journey.

12. A Train leaving Madras at 6 or 6-30 A. M. would obviate this, and whilst it proved a great convenience to those who now travel, inducing them to travel more frequently, it would most probably enable others who do not now travel to do so.

13. But whilst the arrangement of Trains has proved insufficient and inconvenient to the Public, and also to the Company, Eastward into Madras by the Traffic remaining undeveloped, the arrangement, if it were possible, is much more incomplete, inconvenient, and prejudicial to the Company, as regards the Traffic Westward from Madras, inasmuch as there is no possibility of a Passenger travelling Westward and returning upon the same day ; but, on the contrary, he must remain two nights and a day from home in undertaking a journey of 65 miles by Railway, an arrangement which must be pronounced almost as prohibitory to the development of Traffic as could well be devised.

14. You will perceive that, whether the Traffic East or West be considered, the present arrangements must be pronounced unsatisfactory and incomplete, and I am decidedly of opinion that the want of Two Trains conveying Passengers each way daily, has proved more prohibitory to the development of the Traffic than any reasonable scale of Fares could be.

15. I attach so much importance to the facilities which a second Passenger Train each way daily would have afforded to the Traffic, both Eastward and Westward, and the insufficiency of the arrangements hitherto permitted, that it appears to me difficult to draw any satisfactory conclusion from the working of the Passenger traffic, irrespective altogether of the amount charged for the Fares.

16. I would beg to remind you that, on recommending that there should be two Trains for the conveyance of Passengers daily instead of one, I proposed to effect this great desideratum by running mixed Trains

of Passengers and Goods, which would have rendered the experiment easy of attainment and unaccompanied by the risk of the loss, which, possibly at the commencement and for some time, might attend the running of two distinct Passenger Trains as well as a distinct Goods Train.

17. I would beg again to recommend that two mixed Trains for Passengers and Goods should be run daily on and after the 1st July next; I would propose that they should depart as follows.

Trains West from Madras.

Leave Madras 6-0 A. M. and 3-0 P. M.

Trains East to Madras.

Leave Vellore 6-30 A. M. and 3-0 P. M.

18. I do not recommend any specific rate of speed for these Trains, as I apprehend that this point could be arranged after, should it please the Government to sanction the principle.

19. As regards the second point, viz., the great difference in the Fares charged for the respective classes of Passengers, the Second Class being more than double the rate of the Third, and the First Class double the rate charged for the Second, and more than four times that charged for the Third Class, whilst all classes of Passengers alike travel by the same train.

20. The fares charged upon this line have been

First	Class	1 A.	6 P.	equivalent to	$2\frac{1}{4}d.$	℔ passenger	℔ mile.	
Second	do.	0	9	„	$1\frac{1}{8}d.$	„	„	„
Third	do.	0	4	„	$\frac{1}{2}d.$	„	„	„

21. The result, with one Train each way daily only, has been (taking the passenger Traffic without the soldiers) as follows :

	First class.				Second class.				Third class.				Total.			
1856. July	240	834	0	0	759	1172	11	6	14,023	10,443	6	8	15,022	12,502	15	8
August ..	119	522	12	0	632	1023	12	(	11,561	8,492	11	0	12,312	10 088	11	9
September	136	673	14	0	578	1022	8	6	10,878	8,524	7	0	11,592	10,220	13	6
October ..	124	598	12	6	469	847	9	6	10,649	8,482	5	8	11,242	9,928	11	8
November	101	474	1	6	521	861	4	6	9,768	7,841	10	4	10,390	9,217	0	6
December	152	784	15	6	530	1151	11	4	11,932	9,718	8	4	12,614	11,655	3	2
1857 Jany	138	564	6	0	615	1013	4	9	18,889	13,013	5	8	19,642	14,591	0	5
February..	98	431	14	6	424	853	11	9	11,045	8,369	11	2	11,567	9,655	5	5
March ...	99	471	10	6	485	1024	14	0	13,306	9,783	10	6	13,890	11,280	3	0
April	90	383	11	6	418	742	5	9	11,923	9,360	9	8	12,431	10,486	10	11
	1,297	5,740	2	0	5,431	9,713	13	7	1,23,974	94,030	6	0	1,30,702	1,09,626	12	0
Average per mensem...	129	574	0	0	543	971	0	0	12,397	9,403	0	0	13,070	10,962	0	0

22. It will be seen that the number we have carried by the First and Second Classes has been small in proportion to the number carried by the Third Class; but I am of opinion that we should not have carried a less number of either of the higher classes, if the Fares charged had been those proposed by this Company, viz., First Class two Annas, and Second Class one Anna per mile; because, as a rule, very few of those who have availed themselves of these Classes would have travelled by the Third Class under any circumstances.

23. I think, however, it would be injudicious to raise the Fare of the First or Second Class *now*, considering the low Third Class Fare charged, or likely to be charged, by which the difference would be still greater between the higher and the lowest class, placing a further barrier in the way of creating a First and Second Glass Traffic out of the Third Class, or from the Passenger Traffic as it may become further developed.

24. As the subject is one of considerable importance, I beg to quote the different Rates which have been proposed as well as those which have been ordered to be adopted upon this Railway. I also quote the Fares charged upon the East Indian and the Great Indian Peninsula Railways.

25. The Fares proposed by you as per your letter, No. 137, dated 2nd May 1855, were,

First Class	2 A.	0 P.	or 3*d.*	⅌ passenger	⅌ mile.
Second ,,	1	0	or 1½*d.*	,,	,,
Third ,,	0	4	or ½*d.*	,,	,,

The Fares proposed by the Government were,

First Class	1 A.	6 P.	or 2¼*d.*	⅌ passenger	⅌ mile.
Second do.	0	9	or 1⅛	,,	,,
Third do.	0	4	or ½	,,	,,
Fourth do.	0	1½	or 3/16	,,	,,

The Fares proposed by the Board of Directors of this Company were,

First Class	2 A.	0 P.	or 3*d.*	⅌ passenger	⅌ mile.
Second ,,	1	0	or 1½	,,	,,
Third ,,	0	5	or ⅝	,,	,,

The Fares proposed by me, as per my letter No. 35, of the 29th December 1855, were,

First Class	2 A.	0 P.	or 3*d.*	⅌ passenger	⅌ mile.
Second ,,	1	0	or 1½*d.*	,,	,,
Third ,,	0	6	or ¾*d.*	,,	,,

The Fares charged upon the East Indian Railway are,

First class	1 A.	6 P.	or $2\frac{1}{4}d.$	per passenger per mile.
Second ,,	0	9	or $1\frac{1}{8}$	,, ,,
Third ,,	0	3	or $\frac{3}{8}$	,, ,,

The Fares now charged upon the Great Indian Peninsula Railway are—

First Class	1 A.	6 P.	or $2\frac{1}{4}d.$	per passenger per mile.
Second ,,	1	0	or $\frac{1}{2}$	,, ,,
Third ,,	0	3	or $\frac{3}{8}$	,, ,,

with return Tickets, to 9 out of 12 stations, at the three-fourths of the ordinary double Fares, equivalent to the following Rates.

For First Class 1 A. $1\frac{1}{2}$ P. or $1d\frac{1}{16}$. per passenger per mile.
and Second ,, 0 ,, 9 ,, or $1\frac{1}{8}$,, ,,

26. My object, in drawing attention to these different scales of charges for Passenger Traffic upon the Indian Railways, is to particularly point out the difference of Fare between the respective classes of Passengers.

27. You will perceive that, whilst upon this Railway the Second class Fare is more than double the rate of the Third, and the First class is double the rate charged for the Second, and more than four times that charged for the Third class, the East Indian Railway Company's Tariff presents a still greater difference, the Second class being thrice that of the Third, and the First class double that of the Second, and six times that of the Third class; and the Great Indian Peninsula Company's charges present a still wider difference, the Second class being four times that of the Third, the First class being one half only more than the Second, but six times that of the Third.

28. It is worthy of observation that, upon each of the Indian Railways, the numbers conveyed by the First and Second classes are small in proportion to the number conveyed by the Third class; and I think this result is chiefly due to the wide difference of the charge, made upon the Railways of the three Presidencies alike, between the different classes.

29. In this respect, however, this Company has maintained a more reasonable difference than either the Railways of Bengal or Bombay between the Fares for the three classes of Passengers; they stand relatively thus:

	First.	Second.	Third.
Madras........	1 6	0 9	4
Bengal.........	1 6	0 9	3
Bombay.......	1 6	1 0	3

30. I am of opinion that, in each of the Scales of Fares as above quoted (para 25), as well as in each of the Scales of Fares charged upon the Indian lines, there is too great a difference in the fare of the Second class as compared with the Third, and the First class as compared with the Second and Third ; and although in this respect the Madras Railway contrasts favorably with the other Railways of India, I am of opinion that the difference is still too great, if it be considered desirable to develope a First and Second class Passenger Traffic, which I think can be done to some extent.

31. I would here beg permission to refer to the following observation from the letter of the Honorable Court to the Board of Directors, dated from the East India House, 21st May 1856, as follows.

" It is to be apprehended, however, that the proposed Fares for the " First and Second classes will be found too high in comparison with the " Third class. Both in Bengal and Bombay, where a somewhat similar " difference exists, experience has shown that the Third class absorbs " almost the whole, and the Tariff will probably have to be modified."

32. The views of the Honorable Court are precisely those which experience in the working of this Railway would suggest.

33. We have seen Passengers proceeding by the Second, and sometimes by the Third class, whom it would be difficult to suppose would ever travel in any other than First class ; whilst many respectable people, and the highest caste of the natives, have constantly travelled in the same carriage with the Pariah, because the Fare in the Second class was more than double that charged in the Third.

34. If the Fare by the Second class, in such cases, had been nine Pie per passenger per mile, and the Third class six or seven pie, the difference being small would have been paid ; and this class of Travellers would not have regarded it as a hardship that the Third class placed them amongst the lowest class of people, whilst the Fare charged by the Second class seemed prohibitory when compared with the Third class.

35. I am of opinion that the most judicious rate for the Third class would have been six pie per Passenger per mile at the opening of the line, but as four pie has been the rate ordered for adoption, I do not consider it would be politic to make too rapid an advance. I would therefore recommend now that, as soon as practicable, the Third class Fare should be increased one pie, or to five pie per passenger per mile, a rate proposed by the Board of Directors, as per their letter to the Honorable Court, dated 10th April 1856..

36. I would, however, suggest that, if the Third class Fare is made five pie per mile, that the second class should be decreased to 7 Pie per mile, with a special view to its being practically tested whether a second class passenger Traffic can be developed or not.

37. I think the First class Fare could remain as at present, *viz.*, one anna six pie per mile, although I confess that I have had considerable difficulty in arriving at this conclusion, from the fact that it increases the difference between the First and Second classes; but although this might appear to hold out an inducement to the Traveller to avail himself of the Second class instead of the First, I think the increased numbers, consequent upon a reduction in the Second class Fare, and increase in the Third, will have the effect of inducing those whom we should consider as First class Passengers proper to travel by that class.

38. The Fares I would therefore recommend for Passengers would be

	A.	P.			
First class	1	6	equivalent to		$2\frac{1}{4}d.$
Second do..	0	7	,,	,,	$\frac{7}{8}$
Third do.	0	5	,,	,,	$\frac{5}{8}$

But I beg especially to observe, as stated Para 35, that I suggest five pie instead of six from motives of expediency only, and for the especial reasons that such was the rate proposed by the Board of Directors of this Company, and because I think that it would be too great and sudden an increase in the fare, from four pie to six to make at one time.

39. I would beg, however, to impress upon you that, in my opinion, if the Third class Fare is continued at four pie per mile, that the Second class should be lowered to six pie, the First class remaining as at present, *viz.*, one anna six pie per mile.

40. It will be seen that the above Fares, supposing each seat in the respective carriages to be filled, would yield per carriage per mile.

			A.	P.				
First class	24	seats at	1	6	...............Rupees	2	4	0
Second ,,	40	,,	0	7	.... ,,	1	7	4
Third ,,	50	,,	0	5	.... ,,	1	4	10

41. The present Fares would yield per carriage per mile if filled,

			A.	P.				
First class	24	seats at	1	6	...............Rupees	2	4	0
Second ,,	40	,,	0	9	.... ,,	1	14	0
Third ,,	50	,,	0	4	.... ,,	1	0	8

42. It will be seen that the Fares I now recommend would yield per carriage for the Second and Third class a sum approximating closer

to an equality than at present, supposing each carriage to be filled, but I feel persuaded that the earnings of both classes alike, not only per carriage, but per train, will be greater than at present, if the scale I recommend be adopted.

43. I have no particular reason to advance for the proposed increase of fare from four pie to five pie per Passenger per mile for the Third class, that I have not stated in previous reports. I may however say, that I am clearly of opinion that the bulk of our Third class Traffic is such that it would not be affected by an increase in the rate, whilst I am persuaded that if increased facilities were afforded, that the Traffic would increase.

44. I may instance as a portion of the Traffic which, in all probability, would not have been affected if the Third class rate had been five pie instead of four pie, *viz.*, the Troops; to these may be added the native merchants and those employed by them, which constitutes the largest portion of the Third class—the difference in the amount which the Company would have received for the conveyance of Troops would be Rupees 2,800 since the opening of the line in July last.

45. I may briefly refer to the Trivellore Festival Traffic. I think it would be of advantage to the public and to the Company if return Tickets were issued to Trivellore on the occasion of the native Festivals there. I would propose a charge of one Rupee for the journey there and back; if this did not attract I would propose a reduction, although I am persuaded that if increased accommodation were afforded to the public by permitting the different castes to travel in different Carriages, enabling families to travel together, and the wives and females to be placed in Carriages set a part for them, that such arrangements would prove more attractive to the Native community on such occasions than a low Fare.

46. Whilst I think that increased facilities would attract great numbers to the Railway on the occasion of Festivals at Trivellore, it has unfortunately happened that these Passengers have had less accommodation than is afforded on ordinary occasions, inasmuch as they have presented themselves in such large numbers to be conveyed by the one Train leaving in the afternoon that it has been found difficult to issue Tickets without subjecting the Passengers to great inconvenience in the rush and anxiety to obtain them ; and instances have been known of persons applying for a number of Tickets and retailing them to the applicants at a profit outside of the Booking Office.

47. The Carriages have been filled beyond their capability for comfortable transit, and in the desire for conveyance by the Passengers

on the one hand, and anxiety on the part of the Company to carry them on the other, in addition to the over-crowding, families have had to be separated and placed in different carriages, which has been not only a source of complaint, but has, I believe, prevented many from travelling by Railway on such occasions.

48. A remedy has been applied, as far as possible, by running special Trains, but as the Passengers present themselves invariably for conveyance by the ordinary Train which occupies some of our carriages, the Company have not been at that particular hour in the best position to accommodate such numbers.

49. I allude to this Traffic specially because I feel convinced that with reference to it as well as the ordinary Traffic, more is to be obtained by affording facilities and accommodation than by lowering the Fares.

50. It occurred to me that it might be desirable to run two classes instead of three considering the small number carried by the two higher as compared with the lower class, but upon mature consideration I think that the devlopment of the higher classes as they stand should receive every possible trial before so great a change as the annihilation of one of the classes is decided upon.

51. I think we shall find that the reduction in the Second Class fare will increase the number travelling by that Class, and that many of those hitherto travelling by the Second, will travel by the First; if so, we shall be pursuing a course likely to promote the object which I feel exceedingly anxious to secure if possible, *viz.* a paying Pirst and Second Class Passenger Traffic.

52. As regards the third point, *viz.*, the very high and prohibitory Rate for Parcels.

53. The Rates in force upon this Railway have been as follows.

Weight.	Distance. 50 miles and under.			Distance. Exceeding 50 and less than 100 miles.		
5 Seers and under	0	8	0	0	12	0
Exceeding 5 Seers & less than 20.	0	12	0	1	2	0

54. The receipts, exclusive of the amount received for Treasure, have been on an average Rs. 101-1-7 per-mensem; I have no doubt whatever that the receipts would have been much higher if the Parcel Rates had been arranged upon a different and more reasonable principle.

55. The Rates may be called high and prohibitory; this is exemplified by the fact that, as far as practicable, the Banghy Post has been resorted

to for their conveyance, as well as the Goods Train of the Railway in preference to the Passenger Train at the Parcel Rate.

56. The Banghy, or Governmental Post, provides a cheap and sure mode of transmitting Parcels, including delivery, and although such parcels are not received by the Post Office for conveyance to any point upon the line of Railway, as for instance Arcot, the public have found amode of evading this regulation by addressing their Parcels to the nearest place beyond the limits which the Railway has reached. This is instanced by the case of Vellore to which place Parcels for Arcot have been forwarded, a Cooly being despatched to Vellore for them.

57. This fact would alone suggest that the Parcel Rate as it stands does not promote a Parcel's Traffic over the Railway, whilst at the same time it does not meet the public requirements or consult the public convenience, since they resort to so roundabout a mode to avoid transmitting Parcels by Railway.

58. The following Table shows the Rates charged for Parcels by Banghy Post and by Railway at the present Parcel's Rate.

Weight.		Banghy Post.			Parcels Rate.		
		Rs.	A.	P.	Rs.	A.	P.
Not exceeding	1½lb.	0	2	0	0	12	0
Do.	8 ,,	0	4	0	0	12	0
Do.	16½ ,,	0	8	0	1	2	0
Do.	25 ,,	0	12	0	1	2	0
Do.	33 ,,	1	0	0	1	2	0
Do.	41 ,,	1	4	0	1	14	0
Do.	50 ,,	1	8	0	2	4	0

59. The following Table shows the Rates charged for Parcels per Goods Train at Goods Rate, and by Passenger Train at Parcels Rates.

	Goods Rates.									Parcels Rates.		
	Railway charge.			Terminal			Total.					
	RS.	A.	P.	R.	A.	P.	R.	A.	P.	R.	A.	P.
5 Seers and under	0	0	7	0	8	0	0	8	7	0	12	0
Exceeding 5 Seers & less than 20	0	2	0	0	8	0	0	10	0	1	2	0
20 & not exceeding 30	0	3	0	0	8	0	0	11	0	2	4	0
30 ,, ,, 40	0	4	1	0	8	0	0	12	1	3	0	0
40 ,, ,, Md. 1½	0	6	0	0	8	0	0	14	0	4	2	0
1½ ,, ,, 2	0	8	2	0	8	0	1	0	2	5	4	0
2 ,, ,, 2½	0	10	2	0	8	0	1	2	2	6	6	0
2½ ,, ,, 3	0	12	3	0	8	0	1	4	3	7	14	0

60. It will be seen that the Banghy Post provides a cheaper and equally expeditious mode of conveyance, for the Post Office forwards them by the Railway, for small parcels, whilst the Goods Train provides a much cheaper mode for the transmission of large parcels.

61. The classification and Rates for Goods provides that every Parcel, however small, forwarded by Goods Train, shall be charged according to the classification under which the contents would place it, precisely in the same way as a quantity of sugar would be charged under the first class, in which it is specially named; and although Parcels would invariably be charged under the Third, or highest class, the amount calculated at a rate of $\frac{3}{4}$ of a pie per maund per mile yields a very small sum for a Parcel conveyed 65 miles, the Terminal charge of 8 annas upon each consignment, when added, falls far short of affording a fair rate; but this system of charge for small Parcels of Goods has led to many attempts on the part of forwarding Agents to pack a number of Parcels into one Package, which if not detected would enable them to carry probably 100 Parcels, weighing altogether in one Package 240 lbs, the Rate for which would be 0-12-3, and the Terminal charge 8 annas, total Rupees 1-4-3.

62. The forwarding Agent, by charging his customers the Parcel Rate of the Company, which they would endeavour to do, or even the rate by Goods Train or the Banghy post rate, would make a very large profit upon such a package of packed parcels; under such a system a Forwarding Agent could frame a Scale of charges of his own, and forwarding the Parcels by the goods Train of the Railway, act quite independantly of the Company, thus usurping a power of making Rates for Parcels; a power not possessed even by the Railway Company.

63. I believe that generally speaking these attempts at packing parcels, so much deprecated on the Railways at Home, have been detected here so frequently, and the point is so strictly watched, that it is seldom if ever practiced, but the forwarding Agents transmit Parcels entrusted to them by Goods Train, and invariably charge the Parcels Rate to their customers.

64. The Parcels Rate, as it stands, holds out a high premium to the Banghy post and the Goods Train, as well as to the forwarding Agent, and places the Railway Company precisely in the position in which the Metropolitan Railways at home were placed before they established in every part of London their own receiving Houses, collecting as well as carrying, and delivering their parcels to protect them from the doings of forwarding Agents.

65. Under such circumstances, and in order to establish a Parcel

Traffic upon a fair basis, affording facilities of transmission to the public at a moderate charge, and with a view to improving this item of Revenue, I would suggest that the parcel rate I proposed by my letter, No. 35, of the 29th December 1855, should be brought into operation, viz.

Distances.	Parcels.																			
	7 lbs & under		14 lbs & under.		28 lbs & under.		42 lbs & under.		56 lbs & under.		84 lbs. under.			112 lbs & under.			140 lbs & under			Every 28 bls or fractional part.	
	A	P.	A	P.	A	P.	A	P.	A	P.	R.	A	P.	R.	A	P.	R.	A	P.	A	P.
15 Miles and under ..	2	0	4	0	4	6	5	0	5	6	6	6	6	0	7	6	0	9	6	0	10
25 " "	2	0	4	6	5	0	6	0	7	0	0	8	6	0	10	0	0	12	6	1	0
50 " "	2	0	5	0	6	0	7	6	9	0	0	11	0	0	13	0	0	1	0	1	6
75 " "	2	0	6	0	7	0	9	0	11	0	0	14	0	0	1	0	0	1	6	1	9
100 " "	2	0	7	0	8	6	10	0	13	0	0	1	0	1	1	0	0	1	0	2	0

66. As regards the remaining items of Traffic in the Coaching Department, *viz.*, Passengers' Luggage, Horses, Carriages, and Dogs, I have already stated that I consider the Rates charged as at present satisfactory. I have therefore nothing to recommend in respect to them except to suggest that they may be permitted to remain as they are

67. I may however observe that any increase in the Passenger Traffic, whether by increased facilities being afforded or otherwise, that these items of Traffic would improve proportionately.

GOODS TRAFFIC.

68. I now proceed to offer a few observations upon the Goods Traffic.

69. It is unnecessary that I should quote in detail the classifications and the Rates which have been proposed for adoption upon this Railway, or those which have been in force since the opening of the Line. I may however be permitted briefly to refer to them.

70. By your letter No. 137, dated 2nd May 1855, you proposed a Classification and Rates for Goods similar to that formerly in force in Bengal, which met with a counter proposition from the Consulting Engineer, that all Goods (with few exceptions for goods to be charged by measurement) should be charged at one uniform rate of 8 pie, or one penny, per Ton per mile. The Government of India not approving of the views of the Consulting Engineer, were pleased to order that a revised Goods Tariff, then in force in Bengal, should be experimentally tried in Madras. Upon my arrival in India I had the honor, at your request, to suggest a Classification and Rates for Goods, as per my letter No. 35, of

the 29th December 1855, which was transmitted, together with the observations of the Consulting Engineer (concurred in by the Madras Government) to the Government of India, who were pleased to order the present Rates to be put in force upon this Railway, leaving the classification to be arranged by the Consulting Engineer.

71. I have had the honor, in previous communications, to point out to you the great difference that exists between the classification and rates for Goods as ordered for adoption upon this Railway, and those in force upon the Railways of Bengal and Bombay.

72. I have also shewn you that the classification, as it appears to me, is most defective, many Goods being placed in the First Class, which should form a Second Class, and Goods being placed in the Second Class of no greater value than those placed in the First, whilst the rate for the Second Class has been made nearly double the rate charged for the First, the rates for the three classes respectively, being 8, 15 and 22 pie per Ton per mile.

73. The result of this kind of classification has been that nearly all our Goods have been carried at the lowest rate, almost realizing the original proposal of the Consulting Engineer, "to reduce the rate for all descriptions of Goods to a dead level of 8 pie per Ton per mile."

74. I beg now to submit (No. 2) a revised classification of Goods, arranged as nearly as I can place the different kinds of Goods, upon a principle embracing specific gravity value, liability to damage, and capability of bearing a remunerative rate.

75. I have divided the Goods into four classes.

The First, consisting of Goods not liable to damage, requiring, with the exception of a few articles, salt for instance, no cover, and not capable of bearing a high rate.

The second class consists of agricultural produce chiefly, embracing all the principal articles produeed in the country, the bulk of which now constitute our First class.

The Third class consists principally of manufactured articles, and such as, considering their value liability to damage, and should bear a higher rate than the Second class.

The Fourth class consists of articles seldom carried, and such as should, I think, pay a higher rate than the Third class.

76. The rates for the respective classes I propose should be as follows.

First Class	8 pie per Ton	per mile	=	293 per maund per mile.	
Second do	10	do	do	367	,,
Third do	15	do	do	551	,,
Fourth do	24	do	do	881	,,

with 50 per cent upon the weight upon light articles specified.

77. This classification differs but slightly from the classification I proposed for adoption by my letter No. 35, of the 29th December 1855.

78. I have however thought it necessary to place some of the articles I then proposed to charge under the Third class, in the Second, whilst I have placed a greater number of articles in the First class than I originally proposed, which may be said to have been overlooked or omitted in my former classification, such as Bamboos, Cocoanutshells, Chatties, &c.

79. Upon comparing the classification I now propose for adoption with those in force in Bengal and Bombay, you will perceive that the Goods are classified upon a similar principle, and preserve alike the distinctive features I have named in para 75. The same remark will apply upon consulting any classification of Goods in force upon the Railways of the United Kingdom.

80. I may beg, however, to draw your attention to the fact that the classification I now propose places many articles in the Second class which are placed in the Third, and some in the Fourth upon the other Indian Railways.

81. I consider this almost unavoidable under the peculiar circumstances in which we are placed by the classification of Goods now in force upon this Railway, enumerating in the First class many of the Goods placed in the Third and Fourth upon those lines.

82. My object in placing them in the Second class now has been to correct gradually the effect produced by having classified them as First class Goods; and I would beg to observe that I do not regard the present proposed classification as being either perfect or what will be found ultimately requisite, but as being merely one step in that direction.

83. The rate I have recommended for adoption for the First class is, as nearly as possible, that now charged for the First class, viz. 8 pie per Ton per mile, taking the long and the short distances together.

84. The rate for the Second class is an increase of 2 pie, or $\frac{1}{4}d.$ per Ton per mile upon the bulk of the Goods comprising our present First class, and a decrease of 5 pie, or $\frac{5}{8}d.$ per Ton per mile upon a few articles now placed in the Second class of the classification now in force.

85. The rate for the Third class is precisely that now charged for the Second class, *viz.* 15 pie, or $1\frac{7}{8}$*d.* per Ton per mile, in which is contained " Cotton," placing that article at the rate now in force.

86. The rate for the Fourth class is precisely the rate now charged for the Third class, *viz.*, 24 pie, or 3*d.* per Ton per mile, with the addition of 50 per Cent. increase upon the articles already named, and as specified in the classification.

87. The classification is essentially the same I originally proposed, the rates are very much lower, as will be seen by the following comparative scale.

	Proposed 29th December 1855.	Proposed May 1857.		
First Class	$1\frac{1}{2}$*d.*	8 pie	or 1*d.*	per Ton per Mile.
Second do.	2*d.*	10	,, $1\frac{1}{4}$*d.*	,, ,,
Third do.	$2\frac{1}{2}$*d.*	1.3	,, $1\frac{7}{8}$*d.*	,, ,,
Fourth do.	3*d.*	2.0	,, 3*d.*	,, ,,

88. It will be observed that I do not propose the continuance of the Terminal charge at present in force upon this Railway, as I think it tends needlessly to complicate the rates whilst at the same time it practically reduces the rate for long distances, and renders the rate in some cases too high for short distances.*

89. This will be understood by explaining that the Terminal charges for quantities over 32 Maunds in weight is Annas 6-9 per Ton irrespective of distance, the same Terminal Rate being charged upon Goods conveyed 10 Miles or 80 Miles.

90. The Terminal charge of 8 Annas upon small quantities of Goods, less than 32 Maunds, as in force at present, has been oppressive to the senders of such quantities, or of a Bandy load, and has been almost prohibitory. I illustrate this as follows—a common Village Cart carries 12 Bengal Maunds, or about 1000 lbs. weight, the rate would be for 36 miles annas 9, and the Terminal charge annas 8, Total Rupees 1-1-0, being equivalent to a rather more than 14 pie per Ton per mile, whilst the rate upon a larger quantity, if over 32 maunds, would be 9 pie per ton per mile.

91. There are numbers of small cultivators in the villages between Arcot and Madras, who would have frowarded single bandy loads of Goods from every Station if the terminal charge had not operated so prejudicially to them.

92. The proposed Goods Tariff will have the effect, if adopted, of inducing the small cultivator to send his produce to the Railway, since

it will be carried over the Railway at 10 pie per ton per mile irrespective of distance, placing him upon a more equal footing with the large Cultivator.

93. It will be seen that I propose to charge small quantities of Goods at a Rate "per cwt," according to distance, no less charge being made than one Rupee for any quantity, which will have the effect of assisting our parcel traffic.

94. I think it necessary to place before you the reasons which have guided me in proposing the enclosed Classification and Rates for Goods, (No. 2) instead of the Tariff I had the hônor to propose in December, 1855.

95. As before stated the classification is essentially the same, it is precisely what I would have proposed then if I had been as well acquainted with the nature of the Traffic and the value of the different products of the country as I now am.

96. The rates only are changed, and I confess they are lower than I could suppose it would be necessary to introduce under any circumstances; at the same time I was aware that the rates I originally proposed were so nearly those charged upon the road that unless great facilities were afforded there would be no great advantage to the owners of goods in transferring them to the Railway.

97. I did, however, attach great importance to the facilities I imagined (taking my views from those practised at home) we should be able to afford by the collection and delivery of the Goods, pursuing a system by which we could undertake the conveyance of Goods from the godown of the sender at Palmanair or Wallajahpett to the warehouse of the Consignee in Madras.

98. I stated in the proposed Rates for Goods in December 1855, "That all Goods will be collected and delivered by the Company, unless "otherwise directed or consigned; collection and delivery will be charg- "ed at certain rates which can be seen at the Stations, and these charges "will be in addition to the charges for Railway Conveyance."

99. I quote this to show that I contemplated and proposed to carry out the collection and delivery of Goods before the Line opened for Traffic, and I have since alluded to the same subject, but unfortunately I have not been able to arrange a system of the kind for reasons which will be dealt with hereafter.

100. I bring this matter to your notice as one of great importance connected with our Goods Traffic, and one that would, if properly arranged,

and worked with care and energy, have a much greater effect, in my opinion, than the question, important though it be, of what the rate should be over the Railway *per se*.

101. The high rate demanded and paid by the owners of Goods between Palmanair and Wallajahpett and Arcot, and between almost every place and our Stations, and the excessive rates demanded, and often paid, for the delivery of Goods in Madras, has caused the charge for Goods sent by the Railway to be in many cases higher, notwithstanding the low rate hitherto charged over the line, than if sent all the way by road.

102. These high rates paid to the bandymen between any point and a Railway Station, as compared with the charge he would make by road all the way, prejudicial to our interests though they have been, has not been the whole of the evil we have been subject to, by being left at the mercy, so to speak, of our opponents on the roads, in as much as it has very frequently been impossible to obtain bandies to convey produce to the Railway up-country, as well as difficult at all times to insure the delivery of goods in Madras by the same means.

103. Owing to these difficulties and obstructions, and the time occupied in overcoming them by the merchants, there is no doubt that in many instances, if not generally, they prefer being saved the trouble and inconvenience of engaging bandies up country, and again for delivery in Madras, by paying the bandyman a higher rate even than the carriage would cost if carried in connection with or over the Railway.

104. I attach so much importance to the want of a well arranged system for the collection and delivery of Goods, that I have no hesitation in giving it as my opinion that if lower rates had prevailed upon the Railway we should not have carried a greater quantity of Goods, because there could not be a sufficiently low rate charged by Railway to make up or counterbalance the extortions to which the Merchants and the Railway Company would be subjected at the hands of the bandymen at both ends of the line.

105. I can have no hesitation in saying that our present operations are rendered abortive by the want of such facilities as we could and ought to afford, the chief of which would be the arrangement of a proper and efficient system for the collection and delivery of our Goods.

106. In justification of the rates I originally proposed, I have to repeat that I fully calculated upon these facilities, and I am still of opinion that with such arrangements as could be made, the rates I proposed in December 1855 could, with some slight modifications, have

been realised, and would have brought as large traffic over the line, at a much more remunerative rate than those now in force, with no facilities offered further than appertains to the ordinary working of the line and the conveyance of goods simply from Station to Station, with no assistance afforded either in the collection or the delivery.

107. But if we consider the large extent of country upon which we have to operate, the great distances that intervene between one place and another, in short, the extent of the road carriage as compared with the distance by Railway, it would be difficult to conceive what rate, however low, could insure the whole of the traffic of the country to the Railway without the facilities usually afforded in developing traffic.

108. I could not recommend the adoption of such rates until all other means have failed, and I trust that ere long we shall be in a better position in this important respect; but as some time must elapse before any plan could be well arranged and in efficient work, I propose a modified Tariff, a slightly increased rate and a revised classification of Goods, but solely with a view by degrees to attain as nearly to the rates I originally proposed as possible, trusting to the necessary facilities being afforded.

109. I am of opinion that, after the low rates we have had in force from the opening of the Line, with Second class Goods classified and regarded now by the merchants as First, or the lowest class Goods, it would not be politic to introduce a violent change without the aid to which I attach so much importance, I therefore propose to effect an increase in the rates gradually, and the classification and rates now proposed are the first step in that direction, the bulk of the goods being carried at an increase of 2 pie, or $\frac{1}{4}$*d.* per ton per mile.

110. I assume that it is not the intention of the Government or of the Railway Company to decide upon a Tariff now which is not to be subject to such changes as experience may point out as being judicious: if it were so, I should propose higher Rates than those now submitted, relying upon those facilities to which I have before alluded for the full and speedy development of the traffic of the country.

111. You will perceive that I attach great importance to an arrangement for the collection and delivery of Goods, and although this cannot be over-estimated, there are other facilities to be afforded which would, I think, exercise considerable influence over our Goods Traffic.

112. You are aware that I have recommended that Mixed Trains for the conveyance of Passengers and Goods, should be run upon this

Railway; I find that if such were permitted many merchants or their employés would accompany the goods by the same train.

113. Many representations to this effect have been made to me by native merchants and others up-country, as well as by merchants in Madras, and I feel persuaded that many persons have preferred sending their Goods by the road because they could send them in charge of a person who will travel with and not lose sight of the bandies until the Goods were safely deposited in the godown of the consignee.

114. The merchants would, as a general rule, wish to pursue the same plan in forwarding their Goods by Railway, and there would be great advantage attending it if allowed, inasmuch as it would check the tendency which bandymen have of damaging Goods consigned to the Railway.

115. I believe this to apply to the Goods Traffic generally, and I may mention that I find many of the small cultivators include the cost of the journey by Railway in estimating the expense of carriage as compared with the road, their practice being to accompany their Goods to the market.

116. In this country, if a man sends his Goods to market by the road, he would travel with them, and not by Railway, his principal object being not to lose sight of his Goods.

117. There is nothing new in this, as it was a common case in Ireland for the consigner to accompany his Coods by the same train, a course always pursued in Cattle Traffic.

118. One of the advantages of mixed Trains would therefore be that it would afford an additional facility to our Goods Traffic.

119. Another very important subject connected with facilities in carrying on our Goods Traffic, and which has hitherto operated much against the Railway, has been from the want of Roads to our Stations.

120. As regards Arcot, I may mention that for some part of the last year the Road between Vaniembady and Tripatoor, and some portion of it between the latter place and Salem, was so defective, that the traffic was carried over another Road in the direction of Cuddalore, thus, the Salem Traffic during such periods was lost to the Railway.

121. Sholinghur Station stands in the midst of a country without a Road and although we have carried some goods from this Station, I consider the quantity has been very small in proportion to what we should have carried from Cauverypauk and Sholinghur, and the adjacent villages, if a Road had been constructed. It is right however to say

that a road has been ordered to be made, and I trust that when completed we shall have an increased Traffic from this Station.

122. Companypet Station stands in precisely the same position as Sholinghur. A road is, however, under construction to the Naggery district, which will have the effect of remedying the evil to a considerable extent. There are many villages in the neighbourhood of this Station which will, I trust, under a proper system of roads, increase our Traffic from this point considerably.

123. Trivellore Station is similarly situated with the others in respect to roads. There are many villages which would, with roads constructed, increase our Traffic from this Station; I may mention that a road is under construction from Trivellore to the Cuddapah road, which when completed will be of great importance to this Company.

124. If it be considered how few facilities we have possessed, and how many serious obstacles there have been in the way of the Goods Traffic operations of this Railway since the opening, it cannot be in the least a subject of surprise that a large Traffic still passes over the Western Road, notwithstanding the low Rates in force for the bulk of the Goods upon the Railway.

125. Weights. I beg to bring to your notice that I find considerable difficulty in adopting the proposed Tariff to the weights ordered for adoption upon the Indian Lines.

126. The weight being reduced to so low a denomination as the Indian maund of $82\frac{2}{7}$ lbs., and the Rates published adapting it to a rate per maund per mile, renders it difficult, if not impossible, to find a fraction of a pie conveniently adaptable and easily understood; any change in the rate of Goods per Ton per mile is easily expressed, as eight pie per Ton per mile, but it is very different when the weight is computed by maunds of $82\frac{2}{7}$ lbs, or about the 27th part of a Ton.

127. You will perceive that, whilst it is practicable to speak of a weight of $82\frac{2}{7}$ lbs, it is very inconvenient to designate the rate as being about the 27th part of eight pice, or 293 pie per maund per mile.

128. The same remark applies to all the Rates and Classes of Goods, I have endeavoured to remedy the inconvenience by adopting the money to a weight of 100 and 1000 lbs respectively, but the same difficulty is experienced.

129. I propose to remedy it by publishing the Rates to all Stations per maund for the distance, as per the Classification No. 2 annexed, which I trust may be approved.

130. I may observe that the rates of $\frac{1}{4}$, $\frac{1}{2}$, and $\frac{3}{4}$ of a pie, per maund per mile, although published by the Company, are never used, as the merchants and others invariably require the rate from Station to Station, without reference to the rate per maund per mile—the practice is to turn our Scale of Charges into Madras Maunds, and compute the cost of Carriage in their own way per Candy.

131. As stated in my letter, No. 35, of the 29th December 1855, "I think that either a decimal system of weights upon a scientific basis, or "the English Avoirdupois weights, should be brought into use on the "Madras Railway," since we find that, although the accounts are kept and our operations conducted in accordance with the orders of Government, by the introduction of the Indian Maunds and fractional parts of a pie, that, in practice and in fact, the introduction of such a weight and of such fractions are never used by the merchants with whom we have to deal.

132. It would be the greatest possible convenience to us and to the merchants, generally, if Government would be pleased to permit the introduction of some other weight; either the Ton, a maund of 25 lbs, a Candy, or a decimal system upon a Scientific basis.

133. Salt. You will have observed that the quantity of Salt, conveyed over the Railway, has been small in proportion to the quantity conveyed by Bandies by the Road.

134. The quantity we have carried, upon an average, during the last three months, has been nearly 260 Tons per mensem, or about one fifth of the whole trade conveyed in a westerly direction.

135. This is to be attributed to the want of facilities in loading Salt at the cotaurs, as adverted to in my letters, No. 3, of the 14th January, and No. 16, of the 27th February last.

136. I trust that Government will be pleased to sanction arrangements being made to connect the Salt cotaurs with a siding at the Canal Bridge from the main Line of the Railway, so that this important trade may be thrown upon the Railway.

137. If this be effected, it will not only increase our Goods Traffic Westward, but it will be the means of controlling our Traffic Eastward into Madras, as the Bandymen cannot possibly carry Goods, at the existing rates, when deprived of Salt as back carriage, notwithstanding that the rate they now charge for Salt is exceedingly small.

138. I trust, with the arrangements adverted to, that Salt will be conveyed at the rate proposed for First class goods, viz. 8 pie per ton

per mile; I shall, however, watch this Traffic closely, and suggest such changes in the rates, if necessary, as may seem to be required.

139. I will briefly recapitulate the disadvantages under which we have laboured and upon which I have commented in the preceding paras.

First. The defective classification and unequal Rates for Goods, the Second and Third Classes being too high as compared with the First Class.

Second. The prejudicial operation of the Terminal Rates for Goods, as at present in operation.

Third. The want of arrangements for the Collection and Delivery of Goods at all our Stations, in consequence of which the Bandymen have charged high and extortionate rates for the conveyance of goods to the Railway Stations, altho' charging a reduced rate for the Traffic conveyed by them all the way by Road.

Fourth. The want of Mixed Trains, by which the owners could pursue their practice of accompanying or sending a person with their goods.

Fifth. The defective State of the Salem Road, and the absence of Roads to other Stations.

Sixth. The introduction of a weight, the Indian Maund of $82\frac{2}{7}$ lbs, wholly unknown in this Presidency.

140. I have already shewn, in para 87, the difference between the rates I proposed in December 1855, and those I have now the honor to submit for your consideration, and I think it necessary to especially bring to your notice the different circumstances under which the Two Tariffs were proposed.

141. In December 1855, the Line had not been opened for Traffic, and there was no opposition whatever to the Bandymen upon Roads.

142. In May 1857, the Line has been open for Traffic nearly 11 Months, low Rates and a defective Tariff have been in operation, as ordered for adoption by the Government, and opposition by Railway to the Roads has reduced the Bandy Rates for Goods, as compared with the Rates charged in December, 1855.

143. The rates for Bandy hire, before the Line opened, were higher than they are present, and it appeared to me, from the best information I could then obtain, that they could not be materially lower, and that by the Railway charging the same Rates as those charged upon the Roads, or a little less, we could command the Traffic. I therefore proposed Rates in accordance with these views.

144. The Bandy owners have been enabled to maintain reduced rates upon the Roads, because they have received a much higher rate when carrying to the Railway Stations, by which they have been able to compete with us at a loss upon their Road Traffic, made up by the higher rate, in proportion, obtained by them when carrying to the Railway.

145. I attach very great importance to the difference in our position now, as compared with our position in December 1855, arising from the low Rates and the defective Classification which have been in force, to which, in suggesting a Tariff to come into operation one year after the opening of of the Line for Traffic, too great importance, I think, cannot be attached, nor too much care exercised in *gradually* bringing them up to the Standard which the interests of the Company demand.

146. This impression has had considerable influence with me in suggesting the modified Tariff I now submit for your consideration, and I would beg to be distinctly understood that I do not consider such a Tariff is calculated to realize all that we could wish from its operation, but as being a step in that direction only, the end being attained by degrees.

147. I consider now that we are in the reverse of the position we held in December 1855; we had then the opportunity of commencing with moderate Rates; I proposed, to the best of my judgment, such Rates; but if they proved too high we could have proposed to reduce them, as I have always found that raising Rates is most unpopular, destroying the confidence of the merchant, and very frequently leading to opposition.

148. The position in which we are now placed, after the introduction of low and unequal Rates and an injudicious Classification of Goods, is to endeavour to equalize, and by degrees to raise the one, and to re-arrange, upon intelligible principles, the other; in short, we have much to correct, and should endeavour to approach by degrees to those Rates which will make the Railway self-supporting and pay fair interest upon the capital invested.

I have, &c.

(Signed) H. A. FLETCHER,

Traffic Manager,

(True Copy.)

(Signed) T. A. JENKINS,

Agent and Manager.

No. 1.

MADRAS RAILWAY.

Open between Madras and Vellore.

Time and Fare Table on and after *day the* *of* 1857.

The Times shown in this Table are those at which the Trains are intended to arrive at the various Stations, but the Company cannot guarantee these times being kept under all circumstances, nor do they hold themselves responsible for delay.

Passengers, to insure being booked, should be at the Stations 10 Minutes before the time mentioned in the following Tables. The Doors of the Booking Offices will be closed punctually at the hours mentioned in these Tables, after which no persons can be admitted. Passengers cannot be booked at roadside Stations to proceed by the Train in which they have arrived.

Trains West from Madras.

Distance from Madras.	Stations.	First Second and Third Class and Goods.	First Second and Third Class and Goods.	Fares from Madras.																					
				Passengers.									Horses.						Carriages.					Dogs	
				First Class.			Second Class.			Third Class.			One Horse.		If one property. Two Horses.		If one property. Three Horses.		Four Wheel.		2 Wheel or Palankeen			Each	
Miles.		A. M.	P. M.	R.	A.	P.	R.	A.	P.	R.	A.	P.	R.	A	R.	A.	R.	A.	R.	A.	R.	A.	P.	R.	A.
	Madras, Departure	6 0	3 0																						
3½	Perambore ,,			0	6	0	0	2	4	0	1	8												0	8
13	Avady ,,			1	3	6	0	7	7	0	5	5												0	8
18	Tinnanore ,,			1	11	0	0	10	6	0	7	6												0	8
26	Trivellore ,,			2	7	0	0	15	2	0	10	10												0	8
36¼	Chinnamapet ,,			3	6	0	1	5	0	0	15	0												0	12
45¾	Companypet ,,			4	5	0	1	10	10	1	3	2												0	12
56	Sholinghur ,,			5	4	0	2	0	8	1	7	4												1	0
65¼	Arcot ,,			6	1	6	2	5	11	1	11	1	8	2	12	3	16	4	14	6	10	12	6	1	0
80½	Vellore, Arrival.			7	9	6	2	15	3	2	1	9	10	2	15	3	20	4	16	6	12	4	6	1	0

The Arrivals and Departures of Trains are regulated by Local mean-time.

Trains East to Madras.

Distance from Vellore.	Stations.	First Second and Third Class and Goods. A.M.	First Second and Third Class and Goods. P.M.	Fares from Vellore. Passengers. First Class. R.	A.	P.	Second Class. R.	A.	P.	Third Class. R.	A.	P.	Horses. One Horse. R.	A.	If one property. Two Horses. R.	A.	Three Horses. R.	A.	Carriages. Four Wheel. R.	A.	2 Wheel or Palankeen R.	A.	P	Dogs Each. R	A.
	Vellore Departure	6 30	3 0																						
15¼	Arcot „			1	6	6	0	8	9	0	6	3												0	8
24½	Sholinghur „			2	5	6	0	14	7	0	10	5												0	8
34¾	Companypet „			3	4	6	1	4	5	0	14	7												0	12
44¼	Chinnamapet „			4	3	6	1	10	3	1	2	9												0	12
54½	Trivellore „			5	2	6	2	0	1	1	6	11												1	0
62½	Tinnanore ,			5	14	6	2	4	9	1	10	3												1	0
67½	Avady „			6	6	0	2	7	8	1	12	4												1	0
77	Perambore „			7	3	6	2	12	11	2	0	1												1	0
80½	Madras Arrival.			7	9	6	2	15	3	2	1	9	10	2	15	3	20	4	16	6	12	4	6	1	0

The Arrivals and Departures of Trains are regulated by Local mean-time.

Rates for Parcels and Passengers' Luggage.

Distances.	Parcels. 7 lbs & under. A.	P.	14 lbs & under. A.	P.	28 lbs & under. A.	P.	42 lbs & under. A.	P.	56 lbs & under. A.	P.	84 lbs & under. R.	A.	P.	112 lbs & under R.	A.	P.	140 lbs & under R.	A.	P.	Every 28 lb or fractional part. A.	P.	Passengers Luggage.
15 Miles & under	2	0	4	0	4	6	5	0	5	6	0	6	6	0	7	6	0	9	6	0	10	4 Pie per maund per mile.
25 „ „	2	0	4	6	5	0	6	0	7	0	0	8	6	0	10	0	0	12	6	1	0	
50 „ „	2	0	5	0	6	0	7	6	9	0	0	11	0	0	13	0	1	0	0	1	6	
75 „ „	2	0	6	0	7	0	9	0	11	0	0	14	0	1	0	0	1	3	6	1	9	
100 „ „	2	0	7	0	8	6	10	0	13	0	1	0	0	1	3	0	1	7	0	2	0	

Passengers can be booked at Intermediate Stations only on condition that there shall be room in the Carriage. The Tickets given to Passengers, on payment of their fares, will be required to be produced to the Company's Servants, or given up to them whenever demanded; any Passenger, unable or refusing to produce their Tickets, are liable to be charged the Fare from the most distant Station. The Tickets are not transferable, and are only available on the day of issue. When the Passen-

gers leave the Trains the Tickets will be required to be given up. Any person who shall attempt to defraud the Company by travelling, or attempting to travel, upon the Railway, without having previously paid his Fare, or who shall in any other manner attempt to evade the payment thereof, is subject to a penalty not exceeding Rupees Fifty.

Children under three years of age travel free, and above that age are charged full fares.

Passengers' Luggage—All Luggage in excess of 14 lbs weight, which is allowed free, will be charged at the published rates.

N.B.—Act No. 18 of 1854, Clause 9. " No such Railway Com- " pany shall in any case be answerable for lossor injury to any Passen- " ger's Luggage, unless it shall have been booked and separately paid for."

Cloak Rooms—Are provided at the Madras, Arcot, and Vellore Stations for the convenience of parties wishing to have their Luggage left there for a short period, where it will be registered and a Ticket given in exchange, which must be produced when the Luggage is required to be given up ; charge 6 pie each article.

Ladies—A compartment in a First Class carriage will be exclusively reserved for Ladies.

Special Trains, or Special accommodation in the ordinary Trains, for parties or Ladies travelling, may be had on application to the Traffic Manager, Madras Terminus.

Parcels—are received and booked at the Termini and Stations on the Line ; all parcels and packages under 56 lbs weight each are conveyed by Passenger Trains *exclusively*, at Parcels Rates, and all parcels weighing above 56 lbs each are likewise forwarded by Passengers' Train, and charged at Parcels Rates, if "*per Goods Train*" be not distinctly marked thereon.

Dogs—must be provided with chains and muzzles, without which the Company will not be answerable for their safety. Dogs will be conveyed in a compartment of a carriage provided for that purpose, and under no consideration will they be allowed to accompany Passengers inside the Carriages.

Horses and Carriages can be conveyed to and from those Stations only as shown on the other side, but the Company cannot undertake to forward them by any particular Train. As Horse Boxes and Carriage Trucks are only kept at the principal Stations, notice should be given the day previous of such being required, and Carriages and Horses must be at

Stations 30 minutes before the time mentioned in these Tables. Each Horse must be in charge of a Groom.

Goods and Live Stocksare conveyed on the Railway, full particulars of which may be had at the Stations.

Smoking in the Carriages, or on the Stations, is prohibited under a penalty.

Fees—The Company's Servants are prohibited from receiving any gratuities under pain of dismissal.

Complaints—It is requested that any irregularities may be immediately notified to H. A. Fletcher, Traffic Manager Madras.

(True Copy.)

(Signed) T. A. JENKINS,

Agent and Manager.

Rates of charge "per maund of $82\frac{2}{7}$ lbs," for the conveyance of Merchandise.

Distance.	From Madras. To	GOODS. Maund Rate for Classes. First Class			Second Class			Third Class			Fourth Class		
		R.	A.	P.	R.	A.	P.	R.	A.	P.	R.	A.	P.
13	Avady......................	0	0	4	0	0	5	0	0	7	0	0	11
18	Tinnanore..................	0	0	5	0	0	7	0	0	10	0	1	4
26	Trivellore..................	0	0	8	0	0	10	0	1	2	0	1	11
$36\frac{1}{4}$	Chinnamapet..............	0	0	11	0	1	1	0	1	8	0	2	8
$45\frac{3}{4}$	Companypet...............	0	1	1	0	1	5	0	2	1	0	3	5
56	Sholinghur.................	0	1	4	0	1	9	0	2	7	0	4	1
$65\frac{1}{4}$	Arcot.......................	0	1	7	0	2	0	0	3	0	0	4	9
$80\frac{1}{2}$	Vellore......................	0	2	0	0	2	6	0	3	9	0	5	11

Minimum charge One Rupee.

No. 2.

MADRAS RAILWAY.

Regulations for the Conveyance of Goods and Merchandise.

All Parcels and Packages under 56 lbs weight each (unless they form part of a consignment of Goods exceeding that weight) are conveyed by Passenger Trains, exclusively, at Parcels rates, and all Parcels and Packages weighing above 56 lbs each are likewise forwarded by Passenger Trains and charged at Parcels rates, "if per goods Train" be not distinctly marked upon them.

Classification of Goods.

First Class.

Bamboos and Bamboo Mats, Country Wood and Firewood.
Bones.
Bricks, common or fire, Tiles, drain, floor, or roof.
Brooms (Bundles).
Charcoal, Coal, Coke, and Clay.
Cocoanut Shells or leaves, green or dried
Chunam or Lime.

Chatties (Common).
Eggs in hampers (owner's risk).
Earthenware (Country)
Grind-stones.
Grass.
Gunny Cloths and Bags.
Hides and Skins of all kinds (wet).
Iron in Pigs and Bars
Leaves, dried or green (in bundles).
Loam and Laterite.
Manure.

Ores
Palmyrah leaves, dried (in bundles).
Pitch.
Salt.
Sand.
Stones.
Slates.
Timber unwrought, or wrought into Beams or Planks, and Mango Planks.
Wood apple.

Goods in this class to be conveyed in open Waggons, and to be loaded, conveyed, and unloaded, at the risk and expense of the owners. If not removed within thirty-six hours after arrival of Train, demurrage to be charged at the rate of 8 annas per ton for every day, or part of a day, after the thirty-six hours.

Second Class.

Anchors.
Anvils.
Alum.
Bark for Tanning.
Beer, Porter and Ale (in Casks).
Beans (Country).
Bellows.
Bottles (Empty in Hampers).
Betel-nuts.
Bitumen.
Butter and Butter Milk (in Casks, Tubs or Pots).
Buckets.
Cutch.
Castings (heavy).
Chalk.
Cannon Balls.
Canvas and Sail Cloths.
Chains.
Coffee.
Cadjans (colored).
Cocoanuts.

Chillies (dried or green).
Copparas, or Dry cocoanut.
Cloths (country new).
Cuscus.
Candles, (country).
Cumblies (white, black, and red country made, coarse).
Dye or Red wood.
Dammer.
Dates.
Dholl and Peas.
Fish (dried and salted).
Felt.
Flax or Tow.
Flour or Bran.
Furniture (Common country, or not Polished).
Ghee (in Barrels, Tubs, or Dubbers).
Ground nuts.
Gourds.
Grains (of all kinds).

Gum.
Ginger (Green).
Grease (in casks or Tubs).
Glue.
Garlic.
Hemp and Hempen Rope and cordage.
Hides and Skins of all kinds (dried and undressed.
Horns.
Iron (Hoop, Sheet, Scrap Piping).
Jaggery.
Do. Palmyrah.
Do. Dates.
Jute or Jute yarn.
Lac and Lac Dye.
Lead in Pigs, Pipes, or Sheets, &c.
Lead, Red and white.
Mats and Mattings, including Blinds.
Marble (Rough Block).

Molasses.
Myrabolanes, in bags.
Metals, unwrought.
Oil, in Casks, Dubbers, and Tubs.
Onions.
Oil Cask.
Oranges.
Paper, Brown or Country, coarse.
Paun or Beetle leaves.
Pepper.
Paints.
Potatoes.
Rags (in Bags).
Rice and Paddy (in Bags).
Reeds.
Ropes of all sorts, not otherwise classified.
Resin.
Railway bars and chairs.
Salt-Petre.
Seeds of all sorts, not otherwise classified.
Sugar of all sorts, country, not otherwise classified.
Spices, not otherwise classified.
Snuff (Country).
Shoes (Country).
Soap (Common Country).
Soap-nuts, in Bags.
Sulphur.
Steel (in Bars).
Spades or Shovels.
Starch.
Timber, scantling, into Shovels, Pick-handles, or agricultural Improvements, Pannel Doors or Window Sashes and not damageable.
Tents.
Thread, Cotton, Flax, or Wool.
Tobacco.
Twist and Yarn (Cotton or Woollen).
Turmeric or Saffron.
Tar (in Casks).
Tamarind.
Tallow or Lard (in Casks or Tubs).
Tin, Blocks and Sheets.
Vegetable Roots (common country produce).
Wheat.
Wax (Bees).

THIRD CLASS.

Arrow Root.
Barley (pearl).
Bales of Piece Goods, consisting of Cotton, Woollen, or Flax Fabric, of English manufacture.
Bacon and Hams (raw and cured).
Brushes.
Boots and Shoes.
Borax.
Beer, Porter and Ale (in cases).
Bed and Bedding.
Blankets.
Cotton (Raw).
Cloth.
Coral.
Carpetting.
Candles (English).
Carriage Springs, Axles, and Wheels.
Cheese.
Cocoa.
Currants.
Copper and Brasswork, or Pots, &c.
Drugs.
Dry Salteries.
Elephant Teeth.
Fruits, fresh (at owners risk).
Flower Oil.
Furs.
Groceries.
Gates (wood or Iron).
Hay and Straw, (each waggon to be charged not less than two Tons).
Hosiery.
Hard-ware and Ironmongery, not otherwise classified.
Hides and Skins of all kinds (dressed).
Honey.
Hats and Caps.
Indian Rubber.
Indigo.
Ice.
Incense or Perfumery.
Leather (Europe).
Marble (Polished).
Medicine (not otherwise classified).
Machinery in pieces or cases.
Oilman's Stores.
Opium.
Provisions (Salted).
Soap, Europe.
Spirits of all kinds (in wood).
Sugar (Europe refined or loaf, Astagram or Ganjam).
Snuff, Europe.
Saddlery, Whips, and Harness.
Shawls (Europe).
Stationery.
Segars.
Sago.
Sandal wood.
Steel (Plates, sheets, &c.)

Type (Printing).
Vegetables (Green in Hampers).
Vinegar (in wood or cases).
Varnish.
Wines (in wood).
Wearingapparel, Cotton, Flax, or Woollen.

Hay and Straw to be loaded and unloaded by the owners, and the Waggons to be subject to demurrage the same as in First Class.

Fourth Class.

Baggage (Military).
Baths (Shower).
Books.
Bread and Biscuits.
Confectionery.
Castings (Light).
Cutlery.
China-ware.
Fish (fresh).
Guns and Pistols.
Glass and Glass-ware.
Game.
Glass, packed.
Ivory.
Models (wood, for casting, owners risk).
Military accoutrements.
PlateGlass(ownersrisk)
Perfumery.
Shawls, Cashmere.
Spirits (in cases).
Silk.
Toys.
WindowandDoorGlass
Wine (in cases).

With 50 per Cent added.

Bonnets in Boxes.
Clocks and Watches.
Feathers.
Furniture (damageable).
Glass mirrors (owners risk).
Hats (in crates orboxes).
Musical Instruments.
Millinery.
Painting.
Plated Articles.

Agricultural Implements not mentioned, and all long and bulky articles requiring extra accommodation, whether light or heavy.

Bullion.
Camphor.
Coin.
Fireworks.
Fuze.
Gun Cotton.
Gun Powder.
Jewellery.
Lucifer Matches.
Naptha.
Plate and Plated Articles.
Vitriol and other acids

Rates of Charge for the conveyance of Merchandise.

Distance.	From Madras. To	Goods. Tonnage rate for Class, First Class. R.	A.	P.	Second Class. R.	A.	P.	Third Class. R.	A.	P.	Fourth Class. R.	A.	P.
13	Avady	0	8	8	0	10	10	1	0	3	1	10	0
18	Tinnanore	0	12	0	0	15	0	1	6	6	2	4	0
26	Trivellore	1	1	4	1	5	0	2	0	6	3	4	0
36¼	Chinnamapet	1	8	0	1	14	8	2	13	0	4	·8	0
45¾	Companypet	1	14	8	2	6	4	3	9	6	5	12	0
56	Sholinghur	2	5	4	2	14	8	4	6	0	7	0	0
65¼	Arcot	2	11	4	3	6	2	5	1	3	8	2	0
80½	Vellore	3	6	0	4	3	6	6	5	3	10	2	0

The Carriage of Goods "per Ton" will be charged at the above Rates. No less charge being made than one Rupee.

Charges for Small Packages of Goods.

Distances.	Per Cwt.	
	A.	P.
For 15 Miles and under..............................	4	0
,, 25 ,, ,, ...	6	0
,, 50 ,, ,, ...	8	0
,, 75 ,, ,, ...	10	0
,, 100 ,, ,, ...	12	0

The Carriage of Goods "per Cwt" will be charged at the above Rates, no less charge being made than one Rupee.

Rate of Charge for Returned Empty Packages.					
	Hampers, Cases, Boxes, Hat crates in Laths, Tin Cases, Jars in Baskets, Canisters, Barrels, and Smal Casks.	Biscuit tins, & small candle boxes, Bags, Packs, Sacks, and Wrappers	Crate Cases and Boxes according to Size.	Puncheons Hhds.	Pianoforte & such like cases.
For any distance.	Per Package 8. Pie.	First class Rates.	Each one to two annas.	Each Three Annas.	Each Eight Annas.

Regulations for the conveyance of Goods and Merchandise.

1. Every Consignment of Goods when handed to the Company should be accompanied by a Consignment, or forwarding Note, signed by the Sender or Senders.

2. Goods consigned to places beyond the Towns upon the Line of Railway will (unless otherwise directed) be forwarded by the ordinary carriers, or means of conveyance in the various localities, but the Company will not be answerable for any loss, damage, or delay, that may happen to the Goods after leaving the Company's hands.

3. Goods consigned to places to which there are no means of conveyance will remain at the Stations, under the same regulations as Goods which are not intended to be forwarded, or delivered, by the Company.

4. All Goods not to be forwarded, or delivered, by the Company will be at the risk of the owners immediately they are unloaded from the

Company's Railway Waggons. They should be sent for and removed at once. If not removed within 36 hours after arrival per Train, they will be liable to charges for Storage, at the rate of 6 Pie per Maund per diem, in addition to the previous charges, and if not removed within 3 Months they will be disposed of, to satisfy the Company's charges.

5. The Company will not be bound to receive or forward any Packages, or Parcels, the contents of which shall not at the time of delivery for conveyance be declared (if required).

6. Fruit, Fish, Poultry, Game, and other perishable articles not taken away, or not paid for forthwith after arrival, if directed "to be kept till called for," or to the like effect, or without any legible and intelligible directions, or directed to a place not known, or refused by the person, or at the place, to whom or where directed, may be forthwith Sold, by Auction or otherwise, for the benefit of all concerned, and payment or tender of the net proceeds of any such Sale, after deducting of the monies due in respect of the carriage of the said Goods, and of all charges and expenses of Sale, shall be accepted as equivalent to delivery: and the company will not be responsible, except by Special Contract, for any damage arising in respect of any such articles, from the loss of any market, or from non-arrival or non-delivery within any particular time, provided the same arrive and be delivered within a reasonable time.

7. The Company hereby give public notice that they will not be liable for any injury to Marbles, Musical Instruments, Furniture, Toys, or other articles which from their brittleness, fragility, or delicacy of construction, are more than ordinarily hazardous, unless they shall be declared in writing, and an appropriate Rate or charge for the Carriage thereof be paid, or contracted to be paid at the option of the Company.

8. The Company will not be liable for any loss of, or injury to, any Goods put into Wrappers or returned emptied, and declared as such, nor for the non-delivery or mis-delivery of Goods in consequence of the same not being properly directed, nor for the loss of, or injury to, any Goods in consequence of the same being improperly packed, nor for loss by breakage, or leakage, occasioned by bad or imperfect casks or cooperage, nor for loss, waste, or damage in consequence of fermentation.

9. The Rates for Goods do not include collection and delivery, but are only Station to Station charges.

10. In all cases the delivery of Goods will be considered complete, when the same are unloaded out of the Waggon, or Bandy, and placed at the door of the Consignee; the cellaring, warehousing, or lofting of them

afterwards will be at the owners' risk, so also will be the removal of Goods from the Senders' premises into the Waggon or Bandy.

11. In default of payment on demand of any monies due to this Company, in respect of the Carriage of any Articles, Goods or Things they will detain and sell the same, or any part thereof, or if the same shall have been removed from the premises of the Company, will detain and sell any other Goods, within such premises, belonging to the party liable to pay such rates or charges, and out of the monies arising from such sale, will retain such monies so due to the Company and all charges and expenses of such detention and sale, rendering the overplus (if any) of the monies arising by such Sale, and such of the Goods as shall remain unsold to the person entitled thereto.

12. No credit can be allowed, but all goods must be paid for either previously to or at the time of delivery, and if payment be refused, the charge for Storage, or re-delivery, must be defrayed in addition to former charges.

13. The Company do not bind themselves to forward goods from any Station by the first succeeding Train, nor to the arrival of the Goods Trains at any given hour.

14. No goods business transacted on Sundays, Christmas Day, or Good Friday.

15. All goods intended to be sent per Railway must be delivered to the Clerk of the goods Department, between the hours of 6 A.M. and 6 P.M.

(True copy.)

(Signed) T. A. JENKINS,

Agent and Manager.

No. 242.

On a letter from the Agent and Manager of the Madras Railway Company, No. 437, dated the 22d May 1857.

Observations by the Consulting Engineer.

Extract Minutes Consultation F. R. Department, No. 180 of 12th June 1856, No. 191 of 23rd June 1856.

The line of Railway between Madras and Arcot was opened to the public on the first July 1856, and in sanctioning the adoption of a certain scale of charges for Passengers and Goods thereon, Government ordered that such charges should be considered experimental, to be in force for the period of one year, and to be subject to revision, should the Government desire it at the expiration of that time.

Extract Minutes Consultation, No. 40, 23d January 1857.

2. I was instructed, subsequently, to give my opinion upon the subject, and Government expressed their intention of submiting that opinion, with their own views, to the Government of India, in sufficient time to allow of their orders being received by the 30th of last month.

To the Agent, No. 271.

3. Acting upon these instructions, I addressed the Agent on the 18th March, requesting he would favor me, by the 1st of April, with a report upon the working of the present scale.

4. The report was not, however, received in this Office until the 28th of May, and it is now submitted.

Extract Minutes Consultation, No. 180, 12th June 1856.

5. The question, which now awaits the decision of Government, is whether the rates and fares, as established, by order, on the 1st July 1856, shall remain for any longer period in force, or whether the result of the year's working seems to demand a revision; and, if so, on what principle such revision shall be made.

6. The Traffic Manager thinks they should be revised on the principle of making the charges higher. I think they should be revised; but I incline, most decidedly, to lower them all.

7. These are not times when one would willingly trouble the Government with a long report upon any subject; and I shall endeavour to be as brief as is compatible with a full consideration of, and a satisfactory reply to, all Mr. Fletcher's arguments.

* Nos. 91 and 24, dated 27th June 1855 and 19th February 1856, respectively.

8. I have so fully explained, in former reports,* what I consider to be the general principles, by which we should be guided in the consideration of this subject, that I shall content myself now with a recapitulation thereof.

9. We are I think to consider

(1.) That on a Railway, as in the case of all expensive machines, constructed for the concentration and exercise of great power, the object is to do work at the cheapest possible rate; and, in order to effect this, it is essential that there should be abundance of work to do.

(2.) That the more work given us, under such circumstances, to do, the cheaper we shall do it; and the lower our charges are, the greater will be the demand. There is thus, between the charge and the amount of work, a certain action and re-action; each being in its turn cause and effect.

(3.) That it is a great and dangerous fallacy to suppose that high charges produce necessarily large profits.

(4.) That the interest of the Railway proprietary, and of the community at large, are thus much more nearly identical than is commonly supposed; and that the greatest amount of profit will accrue to the former, by extending the usefulness of the Railway as widely as possible among the latter.

(5.) That the demand and consumption of any commodity depend mainly on its price.

(6.) That, as we descend in the scale of society, every reduction of charge, placing an article of common use, such as carriage for men and goods, within reach of another and a larger class, increases its consumption in a highly progressive ratio, till we can reckon nearly the whole population among our customers.

(7.) That thus masses of money are drawn from masses of men; and—to come more particularly to the subject under consideration—

(8.) That by varying the amount of comfort and accommodation and rates of speed (each of which costs money), we may meet on a Railway the condition and requirements of almost every class of society.

(9.) That, in the regulation of a Railway Tariff, the leading principle should be, to make every man or every ton pay what he, or it, costs in the transport, including share of interest on Capital.

(10.) That passengers and goods, in all countries where wealth and civilization have made any considerable progress, require to be moved at different rates of speed; and that the distinction to be drawn between the two is more marked in such countries as this, where the "goods" chiefly consist of raw produce, cheap and bulky.

(11.) That, when we speak generally of determining the fares for several classes travelling by the same train, the fundamental question is, What shall be that of the lowest class? This is the real price charged for the commodity most needed by all—transport. The higher classes are accommodated with, and charged for, something more. They may take it, or refuse it, as they like; and once having a just rate determined for the lower class (the raw material, so to speak), the others are self-adjusting.

(12.) And, lastly, that in classifying either passsengers or goods, with a view to a difference of charge, we should bear in mind, not only the cost of the accommodation and work bestowed upon them, but the extent to which each class of commodity is susceptible of increase, as a consequence of cheap transport.

10. The circumstances that chiefly chracterized this line, at its opening, were these—65 miles of single line had been constructed at a cost of about ⅓th of the average cost of railways in England; our Eastern terminus being the port of Madras, with a population of at least 7,00,000 souls, the seat of Government, with a considerable trade, though, in that respect, far below Calcutta and Bombay.

11. The line passes across an agricultural country, studded with small villages. At the 26th mile, West from Madras, is the large Town of Trivellore, a place of great resort among the Hindoos on certain festivals. Here also the high road to Triputty and Cuddapah branches off.

12. Thirty miles further on is the Sholinghur station, that Town being about 7 miles from the line. Its population is estimated at 4,000.

13. Near the Western Terminus are the large Towns of Wallajahnuggur, Raneepet, and Arcot, while Vellore and Chittoor, the one 15, the other 30 miles from the Arcot station, were also brought within the influence of the line.

14. Before the line was opened, there was known to be a very considerable traffic in goods on the high road from Arcot to Madras; the amount of which was variously estimated at from 50,000 to 1,00,000 tons per annum. This traffic had been for some years steadily on the

increase. The passenger traffic was also believed to be considerable, and known on certain occasions of feasts, &c., to be very great.

15. The amount of work done on the Railway, during the last ten months, may be judged by the following statement.

There were from the 1st of July to the 31st of December 1856.

	Passengers.
Left Madras	*30,361,
Arrived at Do	24,449,
Left Arcot	14,068,
Arrived at Do	13,396,

This is exclusive of soldiers, and gives an average of

Left Madras	165,	per diem,
Arrived at Do	133,	,, ,,
Left Arcot	76,	,, ,,
Arrived at Do	73,	,, ,,

16. From the 1st of January to the 2nd of May the average per diem, obtained in the same way, was, as follows.

Left Madras	180,
Arrived at Do	148,
Left Arcot	84,
Arrived at Do	77,

17. During the first of the above mentioned periods the number of all classes booked on the line was

1st	Class	871,
2nd	Do	3,541,
3rd	Do	71,456,

During the 2nd period (4 Months) there was, as follows.

1st	Class	417,
2nd	Do	20,91,
3rd	Do	61,887,

The daily average booked during the ten Months has been,

1st	Class	4,
2nd	Do	18,
3rd	Do	436,

18. Considering the nature of the country, and the extent of population at the Termini, this work will appear exceedingly light; and

* Equal to about 10 per cent on the population of Madras per Annum.

it was consequently effected by one regular train each way daily, and that a very light one.

Correspondence Rates and fares, page 74.

19. I now turn to a consideration of the fares. Those proposed in the first instance were—

	1st class		2nd class		3rd class		4th class
	A.	P.	A.	P.	A.	P.	
By the Agent and Manager of the Railway	2	0	1	0	0	6	none
By my self	1	6	0	9	0	4	1½ pie, slow train
Sanctioned by Government and adopted	1	6	0	9	0	4	none

and I beg, in passing, to observe that, in cutting off the lower class from the scale proposed by myself, that scale was left with a much higher rate than I should ever have thought of proposing as the lowest. We have, therefore, in comparison with other Indian Railways, been really trying high fares, their lowest being 3 pies, ours 4 pies.

20. The actual results are notorious. None, as a rule, but the wealthier classes of the native community have travelled by this rail. On all occasions of feasts at Trivellore, which lies close to the rail and 26 miles from Madras, a common and very inferior road, running nearly parallel to the rail, has presented to the Railway Officials the unsatisfactory spectacle of thousands of people, some in bullock carriages, others on foot, passing to and fro between that Town and Madras.

21. There appears not a shadow of doubt that the fares have been too high for the people; and the great mass of the population have been denied the privilege of using the rail.

Para 14.

22. Mr. Fletcher, however, thinks that the want of two trains daily has proved more detrimental to the development of the traffic than any reasonable scale of fares could be; and he puts forward, generally, the following hindrances to that development.

1st. The arrangements of trains—by which the same facilities are not afforded to those who travelled Westward, as to those going Eastward, viz, that of returning the same day.

23. Mr. Fletcher dwells much upon this. I myself believe it to be of the most trivial importance, compared to the great question of fares.

24. It was proposed to begin operations here by one passenger train

each way per diem, and the hours (fully concurred in by the Railway authorities) were at first thus.

	A.	M.
Arcot departure..	5	30
Madras arrival..	8	45
	P.	M.
Madras departure..	3	30
Arcot arrival..	6	45

25. The advantages of these arrangements were, that

1st. It suited the postal department that the mail should leave the Capital in the evening and arrive in the morning.

2nd. It is more convenient to travellers generally to do the same.

3rd. If there be any tendency to a daily return traffic in passengers, it is clearly and invariably into a Capital Town and out again, rather than out of it and back again during the same day—and by the above arrangement the longest possible time was allowed (so long as trains only ran by day) for daily visitors to the Capital Town to transact their business before the Evening return train.

26. The one train has been so light that the Railway authorities have never ventured to recommend a second; but, not considering that the lightness of the traffic was due to the high fares, have urged the running of mixed trains;* and they seem to me with this view to magnify most unreasonably the anticipated additional traffic from passengers leaving Madras, and returning to it the same day.

27. These mixed trains have not been sanctioned, being utterly inconsistent with all sound principle; as involving the raising of the speed of the goods, and a consequent increase in the cost of conveying the raw produce of this country, which it is our object to see carried at the cheapest possible rate.

28. The average number of passengers, hitherto arriving daily at Madras, I have shown to be not more than 148. This includes all, and since the Rail runs in the direction of the principal traffic of Madras, connecting Mysore, Bellary, Salem, and Coimbatore, with the Capital, and most of these may be assumed to be travellers from a far, the number of day or return passengers must have been small; and if, as is most unquestionably the case, the return traffic into and out of a Capital and commercial city is (except on festival and holidays) far greater than that from such city and back again, what amount of such traffic could we reasonably except to get in this latter direction, as a return for a sacrifice of so fundamental and important a principle as keeping the goods and passengers distinct? Would it meet the addi-

tional cost of running the goods at a more expensive pace, or compensate for the effect this would produce on the cultivation and sale of sugar, cotton, and other raw produce? I think not.

29. In fact the habits of the people here, and the distance between the principal Towns, render it very improbable that there would be much of this return traffic in any direction, but that towards a busy and populous Town.

Note. The means of visiting and returning from Madras on the same day have, it will be observed, been afforded to the public from the beginning.

30. The idea that the traffic has been materially affected by the want of a second train is therefore wholly erroneous; and the proposal to run mixed trains, with a view to provide such additional accommodation, is, in my opinion, as uncalled for, as the sanction of it would be impolitic.

31. I have not, however, done with this yet. Mr. Fletcher thinks that the price of a commodity does not affect the consumption, so much as the arrangement which places that commodity within reach. This is a new doctrine, quite at variance with our every day experience; and if this were the case with the commodity we are now considering, how does he account for all these crowds of people walking, or driving in bullock carriages, along the road to Trivellore on occasions of festivals? The Railway authorities are prepared to give, and do give, any amount of special accommodation on those days, yet the people walk. They give them the means of going and returning the same day, nevertheless they walk, 26 miles and back, and probably lose three whole working days in doing so.

32. Once more. The Traffic Manager attaches more importance to this than to the fares, and yet he does not expect, even by this, his best remedial measure, to gain as much more traffic as would justify a second passenger train, and therefore he proposes a mixed train.

33. I cannot doubt that a liberal reduction of fares would accomplish more than this.

34. I need not say more on the subject of the second train, as affecting materially the amount of Taffic. I believe, if we had such now, there would not be 10 passengers added to the daily number leaving Madras; and we should, with mixed trains, sacrifice for this the vast interests connected with the cheapest possible transport of our raw produce.

35. Mr. Fletcher says, that the trains returning to Arcot, according to present arrangements, arrived so late in the evening as to render a journey, undertaken under such circumstances, most inconvenient; forgetting, ap-

· Para 9,

parently, that the convenient time for travelling in this country is the night; he subsequently proposes a mixed train to leave Madras at 3 P. M. When would this reach Vellore? If before dark, it must run, goods and all, at an average rate of 20 Miles an hour: if slower, they would arrive at a later and, therefore, according to Mr. Fletcher's views, a more inconvenient hour than ever.

Para 17.

36. I have said thus much not to uphold this or that particular time table—this is a point to which Government will always give full weight to the Railway Officers' opinions; but to show the nature of the arguments, by which it is attempted to prove that inconvenient arrangements, not high fares, have kept the people off the line.

37. Another impediment to the development of the traffic, advanced by the Traffic Manager is, the great difference in the fares charged for the respective classes. This however can in no way affect the total number of passengers of all classes, which has been so very small; and, as I before observed, is an utterly insignificant question, compared with the charge for the lowest class.

38. With a railway constructed, amid such a population as this, with the ostensible view of meeting its wants and making an honest profit out of the work so done—with such a line lying idle the greater part of the day—one light train each way with passengers and the same with goods—it does appear extraordinary that the Traffic Manager should attach so much inportance to the development of the 1st and 2nd classes, while the 3rd class, (the raw Material) is wanting, but he has done more; it will be seen; he has proposed to raise the price of the lowest class, and thus to reduce still further the supply he already has.

39. Is not this indeed to undertake to supply the people with food; to see them starving, and as a remedy to raise the price of bread, and look to the development of a traffic in sandwiches.

40. If there is so much importance to be attached to this, how is it the Americans, a shrewd far-seeing people, have no distinction of classes at all. So far are they from considering it strange, or unjust, that respectable people should travel with the lower classes, that they appear to think it probable every sensible man would like to travel at the cheapest rate.

Letter from the Traffic Manager, para 33.

41. But though I consider this part of the subject deserving of very little consideration, believing that if the lowest class is rightly determined, the others will adjust themselves, I think I can show, that the proportion, existing between the rates at present, is nearer justice and reason, than that proposed by Mr. Fletcher himself.

42. In regulating the fares of 3 several classes travelling by the same train, and therefore at the same speed, we have to consider:

1st. What amount of accommodation each one will have, calculated from the average load of each carriage.

2nd. The value of carriage, and cost of repairs to each description of carriage.

43. Now we shall always get an average nearer to the maximum load of a carriage, as we have to deal with large masses of travellers, and consequently a greater number of vehicles in each class.

Mr. Fletcher has made a mistake on this point, in para 40.

44. The Madras Carriages have maximum loads of

1st class	2nd class	3rd class.
24	30	60

The latter might at a pinch contain more, without any unreasonable discomfort to persons of the lower classes carried at a cheap rate.

Lardner chapter 10, page 185

45. The results in England, according to Lardner, illustrate the opinion I have just given regarding the ratio in each class, between the average load and maximum load. It was taken from 6 or 700 miles of Railway and gives as the proportion.

Actual average load.	1st Class	39	per cent of full load.
	2nd ,,	52	,, ,,
	3rd ,,	66	,, ,,

and the space which a passenger of each class had was very near as 3, 2, and 1, in the 3 classes, supposing the carriages to be nearly the same size.

46. If, therefore, this were the only consideration, and the lowest charge was 4 pies, the charge should be for the 2nd class 8, for the 1st 12 or 1 Anna; but we have the greater cost of construction and maintenance of the 1st and 2nd class carriages to add, and the peculiar nature and position of our first class here being chiefly of European Society, very limited in amount, and not likely to yield, under any circumstances, a good average load.

47. The original scale then of

	A.	P.
1st class..	1	6
2d class..	0	9
3rd class..	0	4

is not so far from a correct scale as that proposed now by Mr. Fletcher of

A. P.	Pies	Pies.	
1 6	7	and 5	for the three classes.

48. I find, on reference to the Report to the Board of Trade for

1855, that the average fare for each class, in the United Kingdom, was as follows:

3rd class	2nd class	1st class.
d.	*d.*	*d.*
0·85	1·43	2·01

The ratio being—

1..............1·68..................2·36.

The fares hitherto charged on this line are as—

1..................2·25....................4·5

Those proposed by Mr. Fletcher are in the proportion of—

1..........................1·4..........................3·6

while the actual accommodation, in space, offered to each class, is

1..........................2..........................3

in England; and on this line has been hitherto,

as 1..........................6..........................15

or thereabouts.

49. But while finding fault, as I have shown, unreasonably with the ratio between the classes, Mr. Fletcher says, these are better than those in Bengal or Bombay; but those railways get much more passenger traffic than we do, and higher aggregate profits, and in neither case are their Termini in immediate connection with so large a population.

50. Mr. Fletcher's remedy, it is seen, for the small amount of passenger traffic on our line, is to raise the charge of the lower class to five pies now, and six hereafter; to "develop" the 2nd class by lowering the charge from nine to seven pies; and to leave the 1st class as it now is, at 1 A. 6 P.

		A.	P.
Thus—1st	Class	1	6
2d	do.	0	7
3d	do.	0	5

51. Mr. Fletcher hopes to induce some of the lowest class to ascend to the higher, no easy matter, though the difference be but 2 pies. He forgets that the difference in the *profit* gained from the few, who thus forsake the 3rd for the 2nd, will not be worth the paper that we are expending in discussing it; that the rise in the rate of the 3rd class will certainly expel a certain number from the line altogether; and that, as it is certain the 2nd Class has already been patronised by many, who, he trusted, would take the 1st, a fall in the 2d class rate will not diminish its attractions.

52. I consider, therefore, that Mr. Fletcher's proposal, to develop the traffic by raising the charge for the 3rd Class, and lowering that for the 2nd, most injudicious.

53. The mass of the people do not travel on the line; yet they travel—on foot and in bullock carts.

54. Is it possible that raising the fare will induce them to alter their practice in this respect? Is it possible that any change in this direction can be looked for, by ingenious contrivances to coax into the 2nd class men and women, of whom so small a proportion can afford to travel even in the 3rd.

55. The rate is altogether too high. It is too high whether we consider the condition of the people, the value of money, or the cost of the line.

56. I believe that this is the first instance, wherein a railway, taking the place of the old modes of transport, has begun by charging higher than they did. The present scale was suggested by me for the better classes travelling by quick train; the poor were to be provided for by a slow train; but this was disapproved. Now if we compare this rate, four pies a mile, with that in England, say one penny (not so low there as it ought to be) and take the labouring man's pay there at eighteen pence a day, we find that he can travel by rail eighteen miles for a day's pay.

57. Taking a working man's pay here at two Annas, he can travel by the rail six miles. At the Traffic manager's proposed rate of six pies he could travel four miles for the same. If such a man has a family (and we all know how they travel here) say an average household of six persons, he can carry them in this way, by rail, at present, one mile for a day's pay. He does not appreciate the privilege, and puts them all into a bullock bandy, in which he can ride just twice the distance for the same money, or they walk.

58. One great error, which will be found at the root of many of Mr. Fletcher's arguments, lies in the too common practice among English managers of omitting all allusion to profits from each particular individual, and drawing attention to gross receipts in each case.

59. Again, in paras 40, 41, and 42, Mr. Fletcher forgets the first principle that should form the very basis of all these calculations. He compares the receipts in each carriage, as if they were all full, while he should know that they never can be so, but that the smaller the number in each class the greater will be the difference (as I have already shown) between the average actual load and the maximum. He seems to forget also that, if the receipts per vehicle are less in the lower classes than the higher, we make up for it by having more carriages.

60. In para 42, Mr. Fletcher says, that it will be seen, that the fares now recommended would yield, per carriage, for the 2nd and 3rd class a sum ap-

The gross receipts from the several classes of passengers be-

tween the 1st July 1856 and 30th May 1857 (11 months) were as follows.

1st.	6,269	8	6
2nd............	11,146	14	0
3rd............	1,16,489	12	11

proximately closer to an equality, &c.; but why should they approach to an equality? Upon what principle is this to be expected, or desired, why the receipts per vehicle of the two classes be equal rather than the 1st and 2nd classes, which according to his own showing are not at all equal?

61. The last reason given, for raising the rates, is that they would earn more by carrying soldiers. They make large profits out of these now, and as hitherto the country has been paying considerable sums for the guaranteed interest, it is well that it should get something done for the same; but I do not think that the Government will be disposed to accept this as a reason for raising the fares. They carry 1,000 men in a train; and, at two pies a mile, this would yield, exclusive of the Officers, &c., and the receipts from families, upward of Rupees 10 per mile gross receipts.

62. The Traffic Manager, in para 33, says that the highest caste Natives have constantly travelled in the same carriage with Pariahs, because the fare in the 2nd class was more than double that charged in the third. No doubt, and he would have had more than double his accommodation.

63. The fact is the lower castes have not been so common, as they ought to have been, on the Railway. They constitute a large, increasing, and industrious class here; at the same time, it is obviously not easy to determine what difference of fare a man will pay to escape from the proximity of these classes: not much evidently; and I think it neither expedient to sanction, nor practicable to carry out the proposition, to arrange for different caste travellers in different carriages.

64. Mr. Fletcher's proposed remedies, viz.,

To run mixed trains,

To raise the fares of the lowest class,

and to develop a 2nd class by lowering its fares, would have no effect, but that of closing the railway to a still greater number of the people, reducing the aggregate number of travellers, inducing a few more perhaps to travel in the 2nd class, of whom some would be 1st class people, by whom he would lose, some 3rd class by whom, the charge for the 2nd class being reduced, he would gain but little.

65. The mixed trains, running at an increased speed, would be the greatest evil of all, in raising the actual cost of moving goods, raw produce &c.

66. It is of the highest importance that raw produce should be carried cheap, and, therefore, slow; and the only case, in which mixed

trains are in my opinion allowable, is that wherein a large class of poor can be best accommodated, by carrying them at a very cheap rate at the "goods" pace.

67. If the Manager wishes to make an experiment, let it be done on sound principles—let him run a second passenger train for a time; he might lose something, and I think, with the present fares, he would; but he would make the trial under the most favorable circumstances, and would soon discover how many additional passengers he would get for this additional "facility."

68. On a review of the operations of the last 11 months, and upon the principles which I have here, and elsewhere, advocated, I propose a revision of the present rates, and the adoption of the following.

1st class		2nd class		3rd class		4th class with goods.	
A.	P.	A.	P.	A.	P.	A.	P.
1	0	0	7	0	3	.0	$1\frac{1}{2}$

or if the low rate for the slow train is still objected to, I would propose

1st class		2nd class		3rd class	
A.	P.	A.	P.	A.	P.
1	0	0	6	0	2

69. These rates will carry almost the whole of our travelling population. A working man for 2 pies a mile will go 12 miles for a day's pay, while a family of 6 can travel, quickly, 2 miles for a day's pav. exactly what they now pay for a bandy.

70. The greater the number of 3rd Class, the greater the facility with which a high average load can be obtained for each vehicle.

71. The greater that average load, the less the temptation to a man to look there for the accommodation, which he has only a right to expect in a higher class. Thus the 2nd Class acquire a fair load, and for the same reason the 1st Class is sought after.

72. The sole reason why men take a lower class, when their natural tastes, or their worldly circumstances, would incline them to take a higher, is this, that, by defective arrangements in the tariff, or in the management, we offer them the same amount of accommodation in the cheap as in the most expensive class.

73. It will be seen by my report on the traffic of last year, that in the 3rd Class the average load of a carriage constructed for 60 was 29. Who can feel surprised if many men, who, seeing it full, would have ascended to the 2nd Class, readily availed themselves of the accommodation thus offered cheap in the 3rd.?

Appendix. A.

74. In the 2nd Class the average load in a carriage intended for 30 was 4·4. Who can wonder if European Gentlemen and ladies save their money by taking the abundant accommodation thus offered them, at a cheaper rate, than the 1st class?

75. But it is important to consider to what extent so moderate a charge as 2 pies would pay.

76. In the same report on the traffic for 3 months ending December 1856, I showed, on a liberal calculation, that the cost of moving each 3rd class passenger a mile had been (exclusive of maintenance of way) 1·25 pies; this was under circumstances which most undeniably rendered the cost higher than it need be, or that, under circumstances which it is in our own power to create, it would be.

77. The number of passengers, among whom the general expenses of each Department had to be distributed, was small—trains few and light—carriages badly filled.

78. I showed also, by way of illustration, how on a simple advance from 29 passengers in a carriage to 45, this cost would fall from 1·25 pies to 0·913 pies.

Appendix A, para 40.

79. This is manifestly susceptible of further reduction in the general charges, and especially in those of the traffic department, while "maintenance of way" would require to be added.

The mileage of 3rd class passengers, during the last quarter of 1856, was 13,45,094, equivalent to 227 passengers over each mile of the line every day in the year.

81. Will it be allowed that we should, descending as we do into the most numerous class, get three times that work by lowering the charge from 4 pies to 2? If so, we should have an annual amount of 3rd class mileage, 1,61,41,128. The gross receipt from these would be Rs. 1,68,137.

82. The expenses would be as follows.

It would be easy to work such a number of passengers up to an average load of 45 to a carriage, which would make the mileage of vehicles $\frac{16141128}{45} = 3,58,691$, and if the mileage of train remains the same, or 49,156, we should have 6·75 3d Class carriages to a train.

83. Allowing Rs. 700 per Mile for the annual cost of maintenance of way, the cost of running these carriages would be as follows.

		A.	P.
Traffic Department	Special & General.	1	5·6
Locomotive Department...		0	8·8

	A.	P.
Carriages	0	2*
Management	0	3
Maintenance of way	1	3
	3	10·4

or for each passenger 1·03 pies per mile. This would be the cost of carrying each passenger one mile, if we had an annual Mileage work to do of 1,61,41,128 3d Class passengers.

84. The total profits for such an amount of work, the charge being 2 pies per mile, would be Rs. 81,546; while the profit in the same class, during the last quarter of 1856, was at the rate of Rs. 76,689 per Annum. The calculation is based on the assumption that we get, by this great reduction of charge, only enough for one train; but there can be no doubt that, with the corresponding reduction of charge on the other classes, their numbers would increase also. More trains would be required—the facilities, which are considered so important by Mr. Fletcher, would be obtained in 2 or perhaps 3 daily trains, and as the work increased, the profits would increase also.

85. The 3d Class mileage performed, at the present high charge, during the last 11 months, has been 55,72,489, or at the rate of 60,80,000 per annum, leaving a difference of about 10,000,000 to be realized by a reduction of fares, being equivalent to about 210 persons travelling daily each way between Madras and Vellore.

86. There are two great feasts† in every year at Trivellore, which attract people from both ends of the Railway. Thousands of people now walk to the place. It would be fair to assume that many, who now cannot go at all, would go on such an occasion, were the means offered them of doing so at a cheap rate, with little fatigue or loss of time.

87. Indeed it is not easy to place any limit to the number that might be expected to throng the rail under such circumstances. We should sweep in at once all the labouring population, and that too of a much wider extent of country than, with the present fares, can be, in any degree, affected by the Railway.

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* This according to the former analysis was pies 0·96, but the carriages were then new and it is here estimated at 2 pies per mile.

† During the festival of the 20th 21st and 22nd of last month, I had the traffic taken on the road with all possible care, and found it reported at a point 7 miles from Madras 8,000, at one, 7 Miles further on, 16,000, and I am informed that large Numbers travel in conveyances by the high road viâ Poonamallee. These are not taken into account. If on these two occasions 20,000 people, visitors to Trivellore, were added to the present number of passengers, it would give an additional Mileage of 10,00,000, with a profit of about Rs. 10,000.

88. It may be observed that the poorer classes, when they are moving, are much more easily and generally affected by the railway than the richer. The former walk their journey ; but if the fares place the railway within their reach, they can at any time direct their steps to a station, take their lift, and walk away at the other end, without waiting or hesitating on account of a conveyance in either case.

89. Take a man, of the two classes, moving diagonally across the line from Chittoor to Conjeveram. The one says, I can take my bullock carriage to this station, but how shall I be sure of a conveyance from the other to Conjeveram. The other walks straight to the Vellore station, gets a cheap lift to Arcot, and thence to Conjeveram, saving himself a walk of 12 miles.

90. The Native Merchants of Vellore, with whom I spoke some days ago, were unanimously of opinion, that of the people who now travel, not more than $\frac{1}{8}$th went by the rail, in consequence of the high rate of charge ; while, they added, that many more would travel than do now, were the Railway offered them on terms suited to their circumstances. A Memo. drawn up by some of these Merchants, and forwarded to me by Mr. Sullivan, will be found appended.

Appendix B.

Parcels.

91. The Traffic Manager considers next the parcels, the charge for which he considers too high at present.

92. They were adopted, as proposed by the Railway Agent, but I agree with Mr. Fletcher in thinking them too high, and would recommend the adoption of the revised scale proposed by him.

93. "Passengers' luggage, Horses, Carriages and Dogs."

Mr. Fletcher considers the present rates for these satisfactory.

94. The charge for luggage is very high, 4 pies per Maund per Mile, and must not be lost sight of in considering the fares.

95. The charge for horse and carriage is so high, as to be, in this country, nearly prohibitory.

96. The propriety of reducing them appears to depend mainly on the possibility of making such arrangements, as would enable a carriage, and one or two horses, to go in the same vehicle.

Goods.

97. The views of the Traffic Manager, regarding the "Goods" Traffic, are much the same as those expressed by him in regard to passenger traffic. The fact that the business has been light, and that most of the traffic of the country has continued on the common road, is attributed by him to defective arrangements rather than to the rates charged.

98. "Classification."

Mr. Fletcher, in paras 68 to 87, discusses the classification and seems to attach importance to this as having affected the traffic hitherto.

Para 70. He has fallen into an error at the outset, which it may be as well to correct.

99. It was not ordered that the present classification should be arranged by the Consulting Engineer. The order on the subject will be found in the published correspondence, where also it will be found that the Agent was requested to prepare, and submit for sanction, a table of rates and classification &c., in the preparation of which it was suggested to him to adopt certain broad principles.

Page 112.

Page 122 A.

100. Of this system of classification (which, I have before given it as my opinion, is neither convenient nor necessary in this country) I observed in my report, No. 185, of the 24th September 1856, that the practice does, in fact, involve the exercise, on the part of the Railway Company, of two distinct powers; the one being to exact payment for work done, the other to levy a tax on the most valuable description of goods; and I added that it is necessarily somewhat arbitrary.

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101. The list of goods originally submitted by the Railway authorities, and since published, contained 191 different articles. The list now submitted by the Agent contains 236.

102. I am not disposed to criticise very closely the principle upon which the classification has been made, as I believe it to be impossible to frame a table of this nature that will not be open to some objection; but Mr. Fletcher says he has framed this on a principle of "specific gravity value," and it will be found that, while this gentleman proposes 4 classes instead of 3, there are few instances indeed in which he proposes to change the relative classes of any two commodities as they stand in the present list.

103. The only important changes in this respect will be found in those commodities which form the staple products of the country, and which were placed originally in the 1st class, on the principle that the consumption of these was pre-eminently susceptible of extension; and that it was to the interest of the Railway to promote their consumption by cheapening, as much as possible, their transport—such are cocoanuts, redwood, ghee, grains, hides and horns, jaggery, oil, rice and paddy, saltpetre, sugar, cotton and timber.

104. This is, I believe, the most important point to be kept in view in framing these classifications, but the above articles are among those the charge for which the Managers now propose to raise. There are many articles in this list* that are of the smallest possible importance to the country, not likely to be carried but in very small quantities—articles of different classes very often in the same boxes—and it is a matter of surprise that the traffic manager should attach so much importance to their classification, when we find him stating, in para 73 of this report, that nearly all our goods have been carried at the lowest rate, that rate having been attached to 53 different articles, while the list now prepared comprises no less than 236 articles of all classes.

* Note. It appears to be taken generally from some English list.

105. I doubt not every care has been bestowed upon this classification; but it is not clear how tents can be charged differently from Military Baggage, or why the latter should be charged more than indigo, or hay and straw more than coffee.

106 The rates hitherto in force are

1st Class	2d Class	3d Class
$\frac{1}{4}$ pie	$\frac{1}{2}$ pie	$\frac{3}{4}$pie

per maund per mile, with an additional terminal charge according to the following rule.

" 8 Annas on all consignments of goods charged by weight and not " exceeding 32 maunds, and the same amount will be charged on all " consignments charged by measurement, and not exceeding the allowance " equivalent, in each class, to 32 maunds."

" Consignment, exceeding 32 maunds weight, or the equivalent " measurement allowance in each class, will be charged a terminal rate " of one quarter of an anna per maund, or its equivalent measurement " allowance."

107. These rates are lower than those originally proposed by the Railway authorities, and the result of their adoption has been that the goods traffic has been light*. A large proportion of the ordinary traffic of the country continues on the high road, and even salt, from Madras Westward, has gone in much larger quantities by road than by rail.

108. The average daily amount of goods booked for Madras at

* Vide appendix C, by which it appears that, during April last, the average daily number of loaded Bandies, passing Woocherry, 12 miles on this side of Arcot, was 1596, or about 800 Tons—the average daily number of Tons passing, during that month, by rail from Madras to Arcot being 23 and from Arcot to Madras 32 Tons, including railway material.

Arcot, during the past 10 months, has been 1016 maunds, or about 40 tons—that booked at Madras for Arcot, exclusive of Railway material, has been still less.

109. During the quarter ending the 31st December 1856, the average size of trains was 19·1 vehicles, the average load 1677 maunds, or about 60 tons.

110. It is quite clear that the attractive force of the Railway was not great, nor sufficient to draw into it even the. Traffic passing by its terminus; and could not, of course, create any great lateral traffic, or exercise any influence over a wide extent of country.

111. Mr. Fletcher attributes this, not to the rates, but to certain defective arrangements.

112. The first subject noticed, as affecting the traffic, is the present defective arrangements for the collection and delivery of goods.

Paras 97 to 103.

113. This gentleman thinks the traffic would be promoted by the Railway Company undertaking to collect goods.

114. In para 10, Mr. Fletcher states that the high rates, hitherto paid by the owners of goods for conveyance to the Railway stations, and then again the excessive rates demanded for delivery of goods in Madras—the highest yet that I have heard of was that charged by their own Agent the storekeeper, who was authorized to "deliver" on his own account—have prejudicially affected the Railway. This may be so, and for a time was to be expected. It is not, however, in the nature of things that this can last long, if the Railway rates are kept down as low as they should be. No owners of carts can long play such a losing game as this. No owners of goods would submit to it. The lowest charge for goods on the rail has not been low enough to beat down the competition at once; the rates for the higher classes of goods have been such as to render the employment of common carts positively advantageous.

115. I need only add, with reference to these three paras, 101, 102, and 103, that there can be no question as to the common carts having competed hitherto, with much success, against the Railway; but if Mr. Fletcher thinks that the Merchants have willingly paid a higher rate for conveyance of goods by cart, than the same would have cost by rail, he is much mistaken, and does injustice to the acumen of these gentlemen at Vellore and Wallajahnuggur, with some of whom I have had much interesting conversation on this subject.

116. The idea that the Railway Company would "collect," by maintaining or employing carts to bring goods from distant Towns to the Railway, as cheap as the independent owners of carts can work, is a mere delusion; no one who is, in the least degree, acquainted with the country but would anticipate failure and loss from any experiment of the kind; as to the delivery of goods at Madras, the first obvious mode of trying this would have been by inviting tenders for the delivery within Madras, at certain rates per mile. This has not been done, and the one experiment made by the Railway anthorities, in placing this delivery in the hands of one of the Company's own servants, as a private speculation, has given no promise of great success in that direction.

117. The fact is, the Common carts can carry at a marvellously cheap rate. There can be no question but that at this moment good carts, carrying 15 Indian maunds at least, can be got to work from Vellore to Madras for 4 Rupees, or even 3½ Rupees, returning with a load of salt for 2 or 2½ Rupees. Taking 6½ Rupees for the double journey, we have 15 maunds carried 168 miles at a cost of 6½ Rupees, being an average charge of less than ½ of a pie per maund per mile, or less than 1 A. 2 P. per ton per mile, including "collection and delivery."

118. In reference to this subject, however, Mr. Fletcher further on, Para 144, makes a very singular statement, to the effect that the bandymen have been enabled to earn large profits by conveying goods to the Railway, and instead of continuing at so profitable a business, they have, from time to time, applied the profit thus made to carrying on a losing business on the high road in competition with the Railway. I think he has been misinformed in this matter, the Madras bandyman being too much alive to his own interests, I think, to carry on so unprofitable a trade.

119. On Mr. Fletcher's remarks regarding the feeding roads, I need only observe that the most important of all those from the Western Terminus to Arcot, Vellore, and Wallajahnuggur, and those from the salt Cotaurs and the Town of Madras to the Station, have been good from the beginning, and yet the Traffic passes by in large quantities, though there is this facility for getting on the Railway station, and the loaded bandies move along the Road daily by hundreds, between Madras and Arcot.

120. As with the passengers, so with the goods; to remedy this state of things, the Traffic manager proposes to raise the rates, and trusts to increased facilities—arrangements, on the part of the Company, to collect and deliver being one to attract the Traffic. He proposes 4 classes.

The	1st	8	pies ₩ ton	or	$\frac{1}{3\cdot4}$	pie	per maund.
	2nd	10	" "	or	$\frac{1}{2\cdot7}$	"	"
	3rd	15	" "	or	$\frac{5}{9}$	"	"
	4th	24	" "	or	$\frac{8}{9}$	"	"

121. The first class contains, with the exception of salt, hardly one article of importance to the country, or such as might be expected to yield any considerable Revenue to the Company ; and it is higher than the present first class in which had been placed most of the more important raw products, all of which, as grain, sugar, cotton, nuts, oil, hides &c., are thus to be raised to a higher class.

122. Mr. Fletcher's fundamental principle seems to be, to regulate his rates by those existing on the roads, to make them only so far below them as may be necessary to monopolize the existing traffic. He ignores, as far as I can see, the enormous power of the Railway, its capability of creating a larger traffic than already exists, and the propriety of regulating the charge with this view; and he forgets also the probability of the country carts never having yet been pushed to work at their lowest.

123. In one place, Mr. Fletcher explains the reason of his present classification and charges differing from those he first proposed, by a reference to his better knowledge of the traffic, and the value of the different products: in another, he proposes this modified tariff, &c., solely with a view, by degrees, to attain as nearly to the rates he originally proposed as possible.

Para 95.

Para 108.

124. I consider Mr. Fletcher has failed to show that the hesitation, evinced by the traffic of the country in taking to the portion of line yet open, is due to any cause but the rates.

125. We have salt, within $2\frac{1}{2}$ miles of one terminus, in any quantity—we have a large traffic passing along a high road within $2\frac{1}{2}$ or 3 miles of the other—and the rail itself 65 miles long. What other facilities can the traffic want? Yet it goes along the high road in large quantities ; and it is a remarkable fact that, hitherto, none of the cheaper articles of consumption in Madras as straw, fuel, bratties, &c., have travelled by Rail. If the Railway cannot supersede the road in every thing—not only so, but if it cannot carry every thing much cheaper than could be done by the road—it must be pronounced a failure, as far as any benefits can be expected from it, in carrying the raw produce of the country.

126. I believe myself that the present charges would be found low enough as the line extends onward, and approaches near to the source of the traffic to monopolize a great deal of that now existing; but it should do more, it should promote a large increase.

127. The only change, I would propose now, is to strike off the Terminal charge, which, originally proposed by the Agent and Manager, and fair enough in principle, is not understood by the people generally, and bears very hard on small consigners, as most of the people are.

128. I am unwilling to propose any unnecessary interference with the classification recommended by the Traffic Manager, the more so, as I still consider the system of charging for goods in this country, according to a classification of this nature, inconvenient and unnecessary. I believe that, with very few exceptions, the several articles enumerated will, or will not, take the Rail as it is found that it is, or is not, cheaper to have them so carried, than carrying them by the common road.

129. Within the last few days, I have had opportunities of knowing several gentlemen who have sent their baggage to Arcot by the road, as being a cheaper mode of carriage than by rail.

130. I propose, however, no interference with the division of these 236 articles into 4 classes, instead of 3, but to change the arrangement by dropping a few of our most important products into the cheapest class, and slightly lowering the charge in each class.

131. The articles whose position is so changed are marked in red ink in the table appended, and the class *from* which removed is shown by a numeral attached.

132. It seems that the Traffic Manager intends to charge nothing by measurement. I do not think there is sound principle in this. The measurement allowed in the present scale, $3\frac{1}{2}$ feet to the maund, is not perhaps sufficiently liberal. 5 feet to the maund, or even 7, might be allowed without risk of loss to the Company.

133. As an instance of the manner in which a rule of this kind operates, I may mention "furniture." This taken, according to the present scale, at $3\frac{1}{2}$ feet per maund, is so expensive to carry by rail, that most people send it by road. Mr. Fletcher has placed it in his 2nd Class, to be carried by weight at 10 pies the ton mile. It would be impossible to pack a ton of chairs, table, sand cots, in any railway carriage, and conveying them at this charge, except by measurement, would be a losing concern. According to the reported capacity of the waggons, the rule of 5 feet to the maund would give as the minimum load to a

Covered waggon $124\frac{4}{5}$ maunds, or 4·5 Tons

Open Do. 160 " or 6 Tons nearly.

134. The rates proposed by the Traffic Manager and myself are shown in the following statement.

	1st Class.	2d Class.	3d Class.	4th Class.
	Pies per Maund mile			
By the Traffic Manager	$\frac{1}{3 \cdot 4}$	$\frac{1}{2 \cdot 7}$	$\frac{5}{9}$	$\frac{8}{9}$
By myself	$\frac{1}{4}$	$\frac{1}{3}$	$\frac{1}{2}$	$\frac{3}{4}$
Measurement 5 feet to the maund.				
Do. 7 do. do. for raw cotton.				

135. The Agent and Traffic manager have expressed themselves in cwts. and tons, but this is contrary to orders, and I have, therefore, thrown it into maunds.

136. I beg to draw the attention of Government especially to the proposed charge for the conveyance of raw cotton. This is placed at present in the first or cheapest class. Finding, however, that being very loosely packed the owners could not afford, even at this rate, to convey it by rail, according to the measurement scale (3 Cubic feet to the Maund), the Traffic Manager proposed to certain Merchants, at Wallajahnuggur, to charge it as 2nd Class, and carry it by weight. The correspondence on the occasion is appended.*

* Appendix D.

137. It is a very important subject, and one that has for sometime past attracted great attention in England—the carriage of East Indian cotton.

138. I proved, by calculations that could not be questioned, that the system and the charge, proposed by Mr. Fletcher, must in the end prove detrimental to the interests of all—the producer, the Railway, and the consumer. Nevertheless it will be found that, in the classification now submitted, he adheres to his proposal, to carry the cotton by weight, and charges it at the rate of 1 Anna 3 Pie per ton, about the present charge by common cart.

I have been informed by a gentleman, well known in the commercial community of Madras, that, as the line advances inwards, there can be little doubt of the merchants creating screws in the interior, if by so doing they can cheapen the carriage of the cotton.

139. My intention is to carry the cotton as cheaply as possible, and with this view to charge for it, in its unpressed state, at such a rate as to induce the owners to send it by rail, while it holds out still greater advantages to them in sending it screwed. With this view I proposed a special measurement for cotton, viz. 7 cubic feet to the maund.

140. Government will observe that the opinions given by the Railway authorities are rarely based on calculations. I do not desire to cast any reflection on the value of what is called a practical acquaintance with such subjects, but I would illustrate the consequence of this mode of handling it by a reference to the following.

141. One of the most important points to be considered, in regulating the rate to be charged for a load, or portion of a load, is the expense of moving a vehicle under certain conditions.

Wagon	Weight 150 maunds. Cost 2,331 Rupees.
3rd class carriage	Weight 174 maunds. Cost 2,162 Rupees.
Covered goods	Weight 218 maunds. Cost not known.

142. It is obvious that, speed being the same, the charge of moving a wagon will not materially differ from that of moving a 3rd class carriage. Mr. Fletcher proposes to run (in mixed trains) the goods at the same speed as the passengers. He admits a minimum load (i. e. a load which will pay) in hay and straw of 2 Tons, the gross receipts of which, per mile, will be 2½ Annas. He thinks 4 pies per passenger too small, and proposes to raise it, to the certain exclusion of some travellers, although, at the low average load of 30, that charge would realize a gross receipt of 10 Annas per mile; and he, doubtless, would condemn the charge I now propose of 2 pies, although with a reasonable average load of 45, that would realize 7½ Annas.

143. Either a waggon loaded with two tons of hay and earning 2½ annas, per mile, would pay, or it would not. The Traffic Manager would certainly not sanction such a rate, if he thought it would not pay; and if it would, a 3rd class carriage, earning 10 annas a mile, or even 7½, would surely pay even better.

144. The last subject touched upon by the Traffic Manager is that of weights. This has been disposed of by the Government of India after full deliberation, and I need, therefore, offer no further remarks thereon.

145. I shall conclude by a brief recapitulation of the subject.

146. During the past year the rates have been experimental. The bulk of our population has not travelled by the rail, the work has been very light, the mileage receipts consequently small.

147. I propose to reduce the rates, with the certainty of greatly increasing the work and the profits.

148. The Railway authorities attribute the light traffic to want of facilities, such as two daily trains; and they propose to raise the most important of all—the lowest class—to lower the 2nd, and devote their energies and attention chiefly to developing the 1st and 2nd classes.

149. The same remarks hold in regard to Goods.

150. The traffic has been very light, and daily trains have been

run for some time past, as it seems to me, at an unnecessary expense. Latterly, before the line was extended to Vellore, the daily load at Arcot going downwards amounted to 30 or 40 Tons.

151. The Vellore extension will, I believe, lead to a considerable increase, even with the present rates; and from the experience we have now had, I recommend retaining those rates, with the exception of the Terminal charge, merely adding an intermediate class between the 1st and 2nd, with the view of accommodating the arrangement to the system of classification proposed by the Traffic Manager. This slight reduction will, I trust, make the rates such as shall not only drive away competition on the road, but lead to a considerable increase in the traffic.

152. The principles, upon which I would determine such questions as these, are given above, and I will to these add but one more, which, I think, is very important to bear in mind, *viz.*

Para 9.

153. That it is to the interest of the Railway Proprietors, of the Government, and of the people, that these Railways should do the work of the country—that all attempts to lead or drive the people to take only the accommodation the Managers choose to give them, something different from what they want, are unsound in principle; and that, consequently, all efforts directed thus to the development of high classes, while the mass of the people are not carried, are empirical and vain. If, therefore, we find that the mass of the people prefer travelling slow—crowded and cheap—to quick—with more accommodation and at a higher charge, we should make arrangements to enable them to do so. It is to the interest of the railway to provide, as near as possible, what the people want.

154. The question is now in the hands of Government. I have endeavoured to show, once more, the principles upon which, I think—with a view to the interest of the Railway, no less than to those of the people—the charges should be framed and our railways managed.

155. It is not for me to offer an opinion on the propriety of the Government exercising the right of interference in this matter, or to investigate their claim to that right.

156. Considering, however, the position of the Indian Companies and the interests at stake, I should say, if care had not been taken to reserve the power of controlling their proceedings, in important matters of this nature, the interests of this country would have been grievously lost sight of. What, it may be asked, would be said in England to a proposal to place all the railways in the hands of a Company—to guarantee to them an interest on Capital from the National exchequer—to secure them

against all interference either in their charges or their management, and at the same time against all competition from rival lines?

157. If the principles, which I have laid down as fundamental, be acknowledged and accepted, the system advocated by the Railway authorities in the regulation of their fares, must be unhesitatingly rejected.

158. As bearing upon the success of this or that tariff, I cannot let the opportunity pass of noticing two points connected with the Management of this Railway, by which it may be presumed the traffic is in some degree affected.

1st. There has been a great want of life in the advertising department, and the publication and distribution of information connected with the work, time tables, notices, &c.

2nd. There has been a most objectionable system followed of maintaining peons at the gates at the Terminal station, with authority to question those passing out; and in a position, therefore, whether authorised or not, to interfere with those going in. All who know the country will recognize the inconvenience of this arrangement.

159. The Railway Directors might be reminded of the advantages resulting from constant and active publication of their terms, time tables, &c., and such notices as would keep public attention upon their undertaking; and also of the evils likely to result from the erection of any barrier between the public and the booking offices.

160. I have only to add, that while I cannot agree with Mr. Fletcher, as to the propriety or the practicability of giving any distinct caste accommodation, I thing it would greatly tend to the comfort and satisfaction of the people if, in every class of carriage, a compartment were set apart for females.

See Appendix B, para 3.

161. I would now earnestly beg the attention of Government to the extreme importance of this question of "rates and fares," and to the prospect held out to this Railway, and to the people of this part of India, if the views of the Railway Directors on these points should remain unchanged and should be acted upon. I would refer to the following passage in my report, No. 24, dated 19th February 1856, para 122. "Now if "the above arguments have any force in them, the scale proposed by the "Railway Managers, excluding the masses of the people, is such as to "render it very improbable that the profits will ever reach that amount;* "while the sentiments of those gentlemen "tend rather in the direction of continually "raising the charges with a view to an increase of profits. We should have "little hope therefore of seeing them lowered or altered."

* 10 per cent.

162. Such were my sentiments rather more than a year ago. What has been the result? We were told the fares were to be experimental. The experiment has been made. There could not possibly be evidence more clear, or more abundant, in favor of the assertion that the rates were too high. Every unprejudiced man in the country recognizes the fact and the proof of it. The gentlemen connected with the Railway, and they alone, come forward and seriously recommend to raise the rates and fares still higher.

163. It is obvious that, under such circumstances, the most momentous question is, not, whether, at the present time, this or that charge is the fairest and best; but, can we hope under these circumstances ever to arrive at a just practical solution of a problem, of such unspeakable importance to the people of this country?

164. The views taken, and the course proposed by the Railway authorities,* and by the Government Officer, are directly opposed to each other; founded upon totally different views of the same question.

165. I have no doubts on the subject, but the Government may have. In such a case, I may perhaps be permitted to suggest, that the whole correspondence might be laid before men conversant with such matters, and yet unprejudiced.

166. The Honorable Court might not object, perhaps, to submit it to the Officer at the head of the Railway Department, in connection with the Board of Trade; or could not do better than place it in the hands of an Officer of their own, now at leisure in England, one who is not more distinguished for his abilities, than he is for scrupulous care and integrity in the exercise of a very sound judgment. I allude to Colonel J. T. Smith.

167. I will conclude with summing up my suggestions, as far as they differ from those contained in the Agent's report.

1st. The passengers to be charged (if only 3 classes) as follows:

	Anna.	Pies.	per mile.
1st Class	1	0	,,
2nd Do	0	6	,,
3rd Do	0	2	,,

Goods.

	Pies.	per maund mile.
1st Class	$\frac{1}{4}$	,,
2nd Do	$\frac{1}{3}$	,,
3rd Do	$\frac{1}{2}$	,,
4th Do	$\frac{3}{4}$	,,

according to the classification appended.

168. That measurement goods be charged at 5 cubic feet to the maund, with the exception of raw cotton, for which a special rate of 7 feet be allowed.

169. That the terminal charge be abolished.

170. That in the passenger trains, carriages or compartments be set apart for females.

171. And I would suggest that if the 4th class with the goods be not approved, a 3rd class carriage be attached to the goods, at a charge per passenger the same as the lowest class of passengers, with a view to the convenience of owners of goods, and consequently to the promotion of the goods traffic.

172. That the charge for parcels, horses, &c., as proposed by the Agent, be adopted.

173. That the great object of conveying the cotton and other raw produce of the country, at the cheapest possible charge, be kept in view, and the speed of the goods train kept low accordingly.

174. I do not consider it desirable, the fares being fixed at a very moderate scale, that there should be any return tickets. The practise is open to abuse, and not likely in this place to lead to any compensating advantages.

Madras, 2nd July 1857. (Signed) T. T. PEARS,
Consulting Engineer for Railways.

To the Acting Chief Secretary to Government, Fort St. George.

PROPOSED CLASSIFICATION OF AND RATES FOR GOODS APPENDED TO THE CONSULTING ENGINEER'S REPORT, DATED 2D JULY 1857, No. 242.

FIRST CLASS.

¼ Pie per Maund.

Bamboos and Bamboo Mats, Country Wood and Firewood.
Bank for Tanning. (2)
Bones.
Bratties.
Bricks, common or fire, Tiles, drain, floor, or roof.
Brooms (Bundles).
Charcoal, Coal, Coke, and Clay.
Cocoanuts............ (2)
Cocoanut Shells or leaves, (green or dried.
Chunam or Lime.
Chatties (Common).
Cotton (Raw)....... (3)
Dates................ (2)
Dholl and Peas...... (2)
Dye or red Wood... (2)
Eggs in hampers (owner's risk).
Earthenware (Country).
Fish dried and Salted.................... (2)
Ghee (in Barrels, Tubs or Dubbers)...... (2)
Grind-stones.
Grains of all kinds. (2)
Grass.
Ground Nuts......... (2)
Gunny Cloths and Bags.
Hay and Straw..... (3)

Hides and Skins of all kinds (wet).
Do. and do. of do. (dried and undried).
Horns.................. (2)
Ice, in water tight Case................ (3)
Iron in Pigs and Bars.
Jaggery.............. (2)
Do. Palmyrah... (2)
Do. Dates......... (2)
Leaves, dried or green (in bundles).
Loam and Laterite.
Mats and Mattings including Blinds.... (2)
Manure.
Molasses.............. (2)
Oil in Casks, Dubbers and Tubs.......... (2)
Oil Casks............ (2)
Ores
Palmyrah leaves, dried (in bundles).
Pitch.
Rice and Paddy (in bags).
Salt.
Saltpetre............ (2)
Sand.
Seeds of all Sorts not otherwise clssified. (2)
Stones.
Slates.
Sugar of all Sorts Country not otherwise classified.... (2)
Tamarind........... (2)
Timber wrought into Beams or Planks and Mango Planks.
Wheat................ (2)
Wood Apple.

SECOND CLASS.

⅓ Pie Per Maund.

Anchors.
Anvils.
Alum.
Beer, Porter and Ale (in Casks).
Beans (Country).
Bellows.
Bottles (Empty in Hampers).
Betel-nuts.
Bitumen.
Butter and Butter Milk (in Casks, Tubs or Pots).
Buckets.
Cutch.
Castings (heavy).
Chalk.
Cannon Balls.
Canvas and Sail Cloths.
Chains.
Coffee.
Cadjans (colored).
Chillies (dried or green).
Copperas, or Dry cocoanut.
Cloths (country new).
Cuscus.
Candles, (country).
Cumblies (white, black, and red, country made, coarse).
Dammer.
Felt.
Flax or Tow.
Flour or Bran.
Furniture (Common country, or not Polished).
Gourds.
Gum.
Ginger (Green).
Grease (in casks or Tubs).
Glue.
Garlic.
Hemp and Hempen Rope and cordage.
Iron (Hoop, Sheet, Scrap, Piping).
Jute or Jute yarn.
Lac and Lac Dye.
Lead in Pigs, Pipes, or Sheets, &c.
Lead, Red and white.
Marble (Rough Block).
Myrabolanes, in bags.
Metals, unwrought.
Onions.
Oranges.
Paper, Brown or Country, coarse.
Paun or Beetle leaves.
Pepper.
Paints.
Potatoes.
Rags (in Bags).
Reeds.
Ropes of all sorts, not otherwise classified.
Resin.
Railway bars and chairs.
Spices, not otherwise classified.
Snuff (Country).
Shoes (Country).
Soap (Common Country).
Soap-nuts, in Bags.
Sulphur.
Steel (in Bars).
Spades or Shovels.
Starch.
Timber, scantling, into Shovels, Pick-handles, or agricultural Implements, Pannel Doors or Window Sashes and not damageable.
Tents.
Thread, Cotton, Flax, or Wool.
Tobacco.
Twist and Yarn (Cotton or Woollen).

Turmeric or Saffron.
Tar (in Casks).
Tallow or Lard (in Casks or Tubs).
Tin, Blocks and Sheets.
Vegetable Roots (common country produce).
Wax (Bees).

Third Class.

½ Pie Per Maund.

Arrow Root.
Barley (pearl).
Bales of Piece Goods, consisting of Cotton, Woollen, or Flax Fabric, of English manufacture.
Bacon and Hams (raw and cured).
Brushes.
Boots and Shoes.
Borax.
Beer, Porter and Ale (in cases).
Bed and Bedding.
Blankets.
Cloth.
Coral.
Carpetting.
Candles (English).
Carriage Springs, Axles, and Wheels.
Cheese.
Cocoa.
Currants.
Copper and Brasswork, or Pots, &c.
Drugs.
Dry Salteries.
Elephant Teeth.
Fruits, fresh (at owners, risk) not otherwise Classified.
Flower Oil.
Furs.
Groceries.
Gates (wood or Iron).
Hosiery.
Hard-ware and Iron-mongery, not otherwise classified.
Hides and Skins of all kinds (dressed).
Honey.
Hats and Caps.
Indian Rubber.
Indigo.
Incense or Perfumery.
Leather (Europe).
Marble (Polished).
Medicine (not otherwise classified).
Machinery in pieces or cases.
Oilman's Stores.
Opium.
Provisions (Salted).
Soap, Europe.
Spirits of all kinds (in wood).
Sugar (Europe refined or loaf, Astagram or Ganjam).
Snuff, Europe.
Saddlery, Whips, and Harness.
Shawls (Europe).
Stationery.
Segars.
Sago.
Sandal wood.
Steel (Plates, sheets, &c.)
Type (Printing).
Vegetables (Green in Hampers).
Vinegar (in wood or cases).
Varnish.
Wines (in wood).
Wearingapparel, Cotton, Flax, or Woollen.

Fourth Class.

¾ Pie Per Maund.

Baggage (Military).
Baths (Shower).
Books.
Bread and Biscuits.
Confectionery.
Castings (Light).
Cutlery.
China-ware.
Fish (fresh).
Guns and Pistols.
Glass and Glass-ware.
Game.
Glass, packed.
Ivory.
Models (wood, for casting, owners' risk).
Military accoutrements.
Plate Glass (owners risk).
Perfumery.
Shawls, Cashmere.
Spirits (in cases).
Silk.
Toys.
Window and Door Glass
Wine (in cases).

With 50 per Cent added.

Bonnets in Boxes,
Clocks and Watches.
Feathers.
Furniture (damageable).
Glass mirrors (owners. risk).
Hats (in crates or boxes).

Musical Instruments.	Coin.	Lucifer Matches.
Millinery.	Fireworks.	Naptha.
Painting.	Fuze.	Plate and Plated Articles.
Plated Articles.	Gun Cotton.	Vitriol and other acids.
Bullion.	Gun Powder.	
Camphor.	Jewellery.	

(Signed) T. T. PEARS,

Consulting Engineer for Railways.

APPENDIX A.

MEMORANDUM.

The following analysis of the traffic operations on the Madras Railway, during the three months ending 31st of December, has been attempted in obedience to the orders of Government, conveyed in an Extract from Minutes of Consultation, No. 430, dated 26th November 1856.

2. I have been under the necessity of confining the analysis to the operations of these three months, though the line was open from the 1st of July, from the absence of various returns during the earlier period, which I did not consider it expedient to call upon the Railway authorities to furnish; inasmuch as the most important result to be hoped from a report of this nature at the very outset of our operations—a result as attainable on three months as on a half-yearly investigation—is the establishment of a complete and practical system of analysis.

3. This is greatly wanted; for without this it is impossible to arrive at any satisfactory conclusion, regarding either the actual cost, or the actual profit, due to each article of transport; and while such is the case, and data drawn from other countries are either not available, or not accepted as guides in this, all arguments regarding rates and fares must be based either on pure theory, or pure assumption.

4. I trust the analysis now submitted, if it serves no other purpose, may, as an object of discussion and criticism, lead to the introduction of a sound system of analysis by, and among, the men engaged in the management of the Railways of this Presidency.

5. I have divided the traffic for the three months into "Passenger" and "Goods" traffic. The expenses, which are given under four heads, Traffic, Carriage Department, Locomotive, Agency and Management, are divided thus by the Railway authorities in all periodical bills, &c., between "Goods" and "Passengers."

6. The question as to the system on which the expenses should be divided among the units of traffic, is one not easily determined.

7. That which I have adopted is as follows;—The Locomotive expenses have been divided according to the actual weight due to each unit. Thus, if there were only two or three passengers, on the average, in a first-class carriage, those two or three bear the Locomotive expenses due to the traction of the whole carriage.

8. The repair of carriages is divided over the work done, and reduced to the mile run by each carriage.

9. The Traffic Department appeared to me to consist of two distinct portions, *viz.*, that which is not sensibly affected by the number of passengers, so long as the trains and carriages remained the same; and that which might be considered directly proportional to the number of passengers booked.

10. For the latter, I have taken in a round sum the whole of the booking clerks, placing the remainder under the former head.

11. The one sum which I call "general expenses", I divide over the mileage of vehicles; the other, or "special expenses", equally among passengers of all classes, the cost per mile in the latter case varying with the average distance travelled by each class. Of these special expenses, I have charged nothing to the miscellaneous traffic—horses, carriages, &c.—thus slightly enhancing the cost to the passengers.

12. The "special expenses", thus charged to each passenger per mile, become $\frac{2}{10}$ ths of a pie. This is very high, and cannot be considered in any degree fixed; since, doubtless, the same establishment would have served to book many more passengers, and keep all the accounts connected with them. It is difficult, with the data furnished by ordinary traffic returns, to attain to perfect accuracy in these matters, and I have endeavoured to err, when some error was unavoidable, on the right side.

13. It will be seen that I have adopted in this matter a different system from that followed by Colonel Baker, in his Memorandum on the traffic on the Bengal Railway. There, that Officer divides the entire expenditure, in the traffic and general management departments, equally among all travellers of whatever class, or whatever the amount of accommodation given. I cannot think this a correct mode of proceeding. However far the system I propose may be from absolute accuracy, I think, when we see a train composed thus—

Dated 7th October 1856, Extract Minutes of Consultation, No. 430, dated 26th November 1856.

1—1st class carriage		with	3 passengers.	
1—2nd	do.	,,	4	do.
4—3rd	do.	,,	30	do. each.
1—Horse box		,,	1 horse.	
1—Parcel van		,,	½ a ton of luggage, &c.,	
1—Carriage truck		,,	1 carriage.	

to divide the whole of the expenses, in the Traffic department, equally among the passengers, so situated, so accommodated, appears still further removed from a just distribution of those expenses.

15. The "general management" is similarly reduced to the vehicle mileage, and thus spread among the units constituting the average load of each carriage.

16. With regard to "Goods", the same general principles are followed; but not being able to class the goods on different vehicles, I am obliged to give an average load, whether of 1st, 2nd, and 3rd class goods, to each vehicle, whatever its description.

17. The results are as follows:—

Passenger Traffic.

Total number booked 3 months,

	1st	376
Appendix C.	2nd	1,562
	3rd	34,184

Receipts.	From Passengers	Rupees	32,905	2	4
	From Miscellaneous	„	4,131	3	7
		Total Rupees	37,036	5	11
Expenses			16,564	14	0
Profit		Rupees	20,471	7	11

18. Statement showing the average mileage cost, in each department, of passenger vehicles, during the three months ending December 1856, and the profits arising from each:

	1st Class.			2nd Class.			3rd Class.		
	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.
Appendix C. Traffic Dept. Special	0	0	0·3456	0	0	0·82467	0	0	5 91658
Appendix C. Traffic Dept. General	0	1	0·68	0	1	0·68	0	1	0·68
B. Locomotive	0	1	1 6976	0	1	0·97016	0	1	0·20408
E. General Management	0	0	5·086	0	0	5·086	0	0	5·086
D. Carriage	0	0	2 99	0	0	0·82	0	0	0·96
Total of each	0	2	10·8	0	2	8·38	0	3	0·84
Average earnings per vehicle per mile	0	3	5·	0	3	1·7	0	9	9
Profit	0	0	6 2	0	0	5·32	0	6	8·16
Mileage	8,663			15,323			45,922		
Total profits on each class	279	11	10	416	4	2	19,172	6	11
				Total profits..			19,868	6	11

Note.—In the returns rendered by the Railway Company, there are discrepancies between the mileage of passengers and the receipts from the same, in each class—discrepancies which, though trifling, are sufficient to cause a disagreement between the profits upon each class, as shown by the carriages on the one hand, and by the average receipts per passenger on the other. In calculating the profits upon each passenger mile, I thought it better to give as the charge the regulated rate, though, assuming this not to be known, the obvious mode of getting the "mileage charge" would be to divide the actual receipt by the actual mileage. The discrepancy, above mentioned, would not then have appeared.

19. Statement showing the average mileage cost (in each department) of passengers in each class, during the above period, the profits arising from each per mile, and total profits from each class.

		1st Class.			2nd Class.			3rd Class.		
		Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.
Appendix B.	Locomotive Dept....	0	0	5·706	0	0	2·941	0	0	0·416
D.	Carriage............	0	0	1·245	0	0	0·186	0	0	0·032
C.	Traffic....	0	0	5·424	0	0	3·057	0	0	0·632
E.	Management....	0	0	2·11	0	0	1·15	0	0	0·17
	Total of each..........	0	1	2·485	0	0	7.334	0	0	1·25
	Mileage charge........	0	1	6.	0	0	9·	0	0	4.
	Profit..........	0	0	3·515	0	0	1·636	0	0	2·75
	Mileage.......	20,805			60,276			13,45,094		
Total profit of each class.....		380	14	1	575	11	3	19,265	10	8
					Total Profits..			20,221	10	0

Goods.

20. Statement showing the average mileage cost of each maund of goods carried, with the average charge for each and profits.

			Pies.
Appendix	H.	Traffic Department..............................	0·0802
	G.	Locomotive do.	0·1042
	L.	General Management..............................	0·0137
	K.	Carriage....	0·0095
		Total.....................	0·2076
		Average mileage charge	0·3875
		Profits..............	0·1799

Total mileage of Goods.........Maunds 1,69,16,344

Total Profits.........Rupees 15,850 4 1

21. It would be premature, at this very early stage in the operations of the Railway, to criticise very closely either the amount of traffic or the working detail.

22. The amount of Traffic has been small; and it is well known that the Rail had not, during the period under consideration, attracted more than a small portion of the general traffic of the country, whether in Passengers or Goods.

23. Not only is the line open too short, relatively; but the time during which it has been at work, is insufficient to render it probable

that any considerable effect has been produced on the business of the country, generally, whether on Goods or Passengers. It is probable there has been some such increase, however, since it is asserted that, while some of the goods traffic has taken to the rail, that travelling on the high Western Road, during the same period, has been larger than ever.

24. In looking through reports of this nature, among the points most worthy of note, seem to be the following—

1. The completeness of load in each carriage.
2. The amount of dead weight moved with each passenger or maund of goods.
3. The size of the trains.
4. The number of such trains.
5. The expenditure of fuel.
6. The relative expenses in the several Departments.
7. The weight of stock.

25. The average loads, it will be seen, were as follows :

Appendix C. Passengers.—1st Class Carriage.........2·4
2nd do. do............4·4
3rd do. do..........29·29

Appendix G. Goods—Average of all classes,...maunds 87·5

The latter is reduced much, in consequence of the traffic being almost wholly one way—eastward.

26. With regard to the Passengers, it seems that there has not been a sufficient number of the higher classes to fill even one carriage. Improvement may fairly be looked for, in this respect, as the line extends; otherwise, some change will be necessary, either in the rates or in the nature of accommodation.

27. Of the 3rd class it may be hoped that, when the nature and requirements of the traffic become better known, the average load will be increased.

28. The amount of dead weight is shown by the gross weight due to each passenger, *viz.* for

Appendix C.
1st class..............101·91 maunds.
2nd do. .... 52·52 do.
3rd do. .... 7·4 do.

Assuming each passenger at $1\frac{1}{2}$ maund, the unprofitable weight carried about with each is in the case of the

1st class... 68 times his own weight.
2nd do. ... 34 do. do.
3rd do, ... 4 do. do.

29. The passenger trains were small—consisting, on an average, of 7·508 carriages. The Engines, with the staff, &c., were consequently worked below their power.

Appendix H.

30. The Goods' trains were also light, averaging 19·1 carriages and 5578 maunds of gross weight.

31. The average weight of train, in the latter case, is greatly reduced, by the peculiar nature of the traffic, which is, at present, almost wholly in one direction—eastward.

32. The number of regular trains is small—one each way every day for Passengers, and the same for Goods every day, except Sundays. The stock, it will be seen, is very heavy.

33. The expenditure of fuel is not easily reduced to a standard, as it depends so much, not only on the character of the Engine, but on that of the line. On the Madras line there is a continued fall in one direction, and in that direction is the great bulk of the traffic. The expenditure does not appear to have been heavy; but I imagine it is susceptible yet of reduction; and, considering its cost here, this point is one deserving of close attention.

34. It will be seen, from the above, that the Madras Railway is yet in the condition of an expensive machine which has not work enough to do.

35. This may be due to any, or in a measure to each, of the following causes:—

1st. The people may require further time to become acquainted with the line, and to adopt this new mode of transport for themselves and their goods.

2ndly. The line may not have extended far enough to make it worth the while of carriers from a distance to tranship their loads. Such has certainly been the case to a great extent.

3rdly. The obvious difficulty in diverting the owners of common carts from their old employment on the trunk road, to that of feeders to the Railway.

4thly. The charge may be too high, or

Lastly, some imperfection in the management may, for a time, tend to discourage the traffic.

36. It is quite clear that, to work an expensive instrument of this nature profitably, it must be kept fully, or at all events abundantly, supplied with work.

37. It does not seem to be in the nature of things—it certainly is neither to be expected nor desired—that capital lying idle, whether as

rails or engines, or in any other form—for several days in the week, or for 20 hours out of the 24—should yield a satisfactory return to its proprietors.

38. It will be seen, at a glance, that, if the work to be done were by any means increased on such a line as this, the actual cost of doing each unit of that work would be diminished.

39. The first effect of increased work would be increased loads to vehicles, involving additional expenditure so small as to be hardly appreciable. The next effect would be an increase in the number of vehicles per train, still causing an increase in only a portion of the expenditure; and, lastly, an increase in the number of trains would take place, attended with similar results.

40. In very brief illustration of this, and referring to the details in the Appendices, I will assume that the 3d-class travellers had been 45 to a carriage, instead of 29·29, the total mileage would have been...20,66,490

instead of...........13,45,094

Difference...... 7,21,396

41. The only additional charge would have been coke and special traffic expenses, which are—the former pies ·023,* the latter pies 0·2† per mile—total ·223 pies per mile; the profit, therefore, would have been upon each passenger pies 4—·223=3·77 pies per mile, or 7,21,396× 3·77=Rs. 14,164-14-6.

* Appendix B.
† Do. C.

42. The charges on each of the 3rd-class passengers, thus increased in number, would have been as follows:—

	Pies.
Locomotive expenses......	0·3
Carriage..................................	0·02
Traffic Department...	0·48
Management............................	0·113
Total......	0·913

43. In other words, the average cost per mile of each passenger would have fallen, upon such an increase of passengers per vehicle, and the average profits upon each would have increased considerably.

44. It would make this Memo. too long, were I to enter further into the subject; but I have endeavoured to give, in the Appendix, the whole of the details necessary, to enable those, who are interested in such questions, to calculate for themselves what would be the probable effect of any increase in traffic, in whichever of the above three modes

it affected the working, whether, by filling the vehicles better, completing the trains, or increasing the number of them.

45. It will be observed that no charge is made for "maintenance of way" during the period in question, the expenditure in that department not coming upon Revenue until the line has been open one year. It will be seen also, that the charge for repairs to stock is light for this period—Engines and Carriages being new.

46. In considering to what extent the actual cost, per unit of work, will hereafter be increased on this account, it must be borne in mind that, in both the Locomotive and Traffic departments, while every effort has, I believe, been made to conduct the working operations as economically as possible, the general expenses have been relatively high in consequence of the shortness of the line and present lightness of the traffic. A reduction in these, or rather their distribution over a greater length of line, and a greater amount of traffic, will do more, I believe, than compensate for the addition of "maintenance of way" charges.

MADRAS,
4th March 1857.

T. T. PEARS,
Consulting Engineer for Railways.

APPENDIX A.

MADRAS RAILWAY.

PASSENGERS TRAFFIC.

Open 65 Miles from Madras to Arcot.
Revenue Account (Three Months) from 1st Octr. to 31st Decr. 1856.

PAYMENTS.						
To Locomotive Department—Salary of Superintendent and Office expenses	580	4	8			
Foremen, Enginemen, and Firemen's Wages	1,604	14	6			
Wages of Laborers, Cleaners, &c	225	9	1			
Coke and Coal consumed	2,584	11	11			
Oil, Tallow, waste, &c	287	12	9			
Materials for repairs of Engines and Tenders.	267	13	9			
Wages for do.	453	3	8			
				6,004	6	4
REPAIRS OF CARRIAGES AND WAGONS.						
Superintendence	63	2	7			
Wages	237	9	6			
Stores	215	6	11			
				516	3	0
TO TRAFFIC DEPARTMENT.						
Salaries of Traffic Manager and Assistant Station Masters and Clerks	4,038	1	7			
Salaries of Guards	264	14	2			
Wages of Porters, Greasemen, &c	1,222	14	1			
Wages of Gatemen, Pointsmen, &c	509	9	0			
Cost of Tallow, Grease, and Waste	172	6	0			
Cost of Oil, in lighting Stations and Signals, and for the use of Pointsmen, &c	271	12	0			
Cost of Tickets issued	28	7	6			
Advertising, Printing, and Stationery	839	1	8			
Cost of Stores not otherwise classified	47	6	4			
Travelling expenses and allowances	199	13	4			
Contingent Charges and Petty Disbursements.	4	4	8			
				7,598	10	4
TO GENERAL CHARGES.						
Agent and Manager, Cashier, Audit and Accountant, and Office expenses				* 2,445	10	4
Total Expenditure				16,564	14	0
Receipts for three months				37,036	5	11
Profit Rupees				20,471	71	11

(Signed) T. T. PEARS,
Consulting Engineer for Railways.

* The total expenditure is Rupees 3,668-7-5, of which some one-third has been charged to Goods and two-thirds to Passengers, in accordance with the arrangement adopted by the Agent and Manager in the Half-yearly Revenue Account

APPENDIX B.

PASSENGER TRAFFIC.

3 Months, October, November and December 1856.

Locomotive Department.

Locomotive Engines:

Miles run with trains	12,491½
Piloting and Shunting	269
Total	12,760½

Expenses.				R.	A.	P.	*per Cent.*
Foremen, Enginemen, and Firemen's wages				1,604	14	6	26·7
Cleaners, Cokemen, and Watermen				225	9	1	3·7
Coke, cwt. 1,805				2,526	15	11	43·0
Coal, do. 52½				57	12	0	
Oil, tallow, &c.				287	12	9	4·8
Repairs.							
Engines. Material	264	9	3				
Engines. Wages	445	3	6				
				709	12	9	12·0
Tenders. Material	3	4	6				
Tenders. Wages	8	0	2				
				11	4	8	
Superintendence, &c				580	4	8	9·8
Total Locomotive Expenses, Rupees				6,004	6	4	100·0

Total per train mile	R.	0 7 8·29
Fuel per train mile	lbs.	—— 16·65
Do. per engine mile	,,	—— 16·13
Cost of fuel per train mile	R.	0 3 3·72
Do. per engine mile	,,	0 3 2·89
Average weight of train gross	Maunds	1,643·38
Do. do. do. inclusive of Engine and Tender	,,	2,465·07
Average Locomotive expenses per maund gross per mile	Pies.	0·056
Do. do. do. including Engine and Tender		0·037
Do. cost of fuel per maund gross per mile		0·023

Do. do. do. including Engine and Tender .... 0·015

Repairs of Engine and Tender per mile run, exclusive of Office expenses and Superintendence .... 10·8

Average gross weight of each Vehicle.

1st	244·6	maunds.
2nd	231·61	do.
3rd	217·93	do.
Luggage Van	196	do.
Break do.	196	do.
Horse Box	240	do.
Carriage Truck	148	do.

Locomotive expenses, per Vehicle per mile.

1st Class	Pies	13·6976
2nd do.	„	12·97016
3rd do.	„	12·20408
Luggage Van	„	10·976
Break do.	„	10·976
Horse Box	„	13·440
Carriage Truck	„	8·288

Locomotive expenses, per passenger mile.

1st Class	Pies	5·70696
2nd do.	„	2·94112
3rd do.	„	0·41664

NOTE.—82$\frac{2}{7}$ lbs. Avoirdupois = 1 Maund.
27·219 Maunds = 1 Ton.

T. T. PEARS,
Consulting Engineer for Railways.

APPENDIX C.

PASSENGER TRAFFIC

3 months—October, November, and December, 1856.

TRAFFIC DEPARTMENT.

Booked.

1st Class Passengers...	376
2nd do.	1,562
3rd do.	34,184
Total...	36,122

Average distance travelled by each.

1st Class...... Miles	55·33
2nd do.	42·43
3rd do.	39·34

Mileage.

1st Class...	20,805
2nd do.	66,276
3rd do.	13,45,094
Total Mileage...	14,32,175

Receipts.

1st Class... Rupees	1,856-14—6
2nd do. ,,	2,954—5—6
3rd do. ,,	28,093-14—4
Total Passengers	32,905—2—4
Miscellaneous	4,131—3—7

Receipts per Passenger booked.

	Rs. A. P.
1st class	4 15-0·2
2nd do	1-14-3·14
3rd do	0-13-1·79

Trains.

Mileage of trains...	12,289
Average number of Vehicles per train...	7·508
Receipt per train mile ... Rupees	3·01

Average constitution of train

1st class carriage	0·481.
2nd do	0·775
Composite...	0·67

3rd class...	3·736
Luggage Van...	0·935
Break Van...	0·095
Horse Box	0·554
Carriage Truck...	0·262
	7·508

Average lead of train	Passengers	116·54	
Average weight of train	Gross......	1,643·38	Maunds
	Net......	194·81	do.

Vehicles.

Mileage of

1st Class Carriage...	5,915
2nd do.	9,529
Composite...	8,242
3rd Class......	45,922
Luggage Van...	11,491
Break Van...	1,170
Horse Box...	6,814
Carriage Truck...	3,225
	92,308

Average load of each Vehicle.

1st Class...	Passenger	2·4
2nd do...	do	4·41
3rd do	do	29·29

Average earnings per Vehicle per mile.

	R. A. P.
1st..	0—3—5
2nd	0—3—1·7
3rd	0—9—9
Luggage Van... Break Van...... Horse Box...... CarriageTruck.. } Average Earnings	0—2-10·94

Average gross weight due to each Passenger.

1st Class	101·91	Maunds.
2nd do	52·52	do.
3rd do	7·44	do.

Total expenditure	General,...	Rupees	6,098-10—0
	Special,...	do	1,500—0—0
		Rupees...	7,598-10—0

Total mileage of Vehicles... 92,308

General... ... ...Rupees 6,098–10—0

Per Vehicle per mile... ... 0—1—0·68

Mileage Charge per Passenger.

1st Class Passenger	Pies	5·28
2nd do.	„	2·87
3rd do.	„	0·43

Special... ... ...Rupees 1,500 0 0

Mileage Charge per Passenger.

1st Class	Pies	·144
2nd do.	„	·187
3rd do.	„	·202

Total Mileage Charge of Traffic Department.

1st Class..........................	Pies	5·28+·144=5·424
2nd do..........................	„	2·87+·187=3·057
3rd do..........................	„	0·43+·202=0·632

T. T. PEARS,

Consulting Engineer for Railways.

NOTE.—82$\frac{2}{7}$lbs. Avoirdupois=1 Maund.

27·219 Maunds =1 Ton.

APPENDIX D.

PASSENGER TRAFFIC.

CARRIAGE DEPARTMENT.

Statement showing the mileage of Vehicles and cost of Repairs, for three months, October, November, and December, 1856.

Names of Vehicles.	Mileage.	Cost of Repairs for 6 months.			Cost of Repairs for 3 months.			Cost of Repairs per mile.			Remarks.
		Rs.	A	P.	Rs.	A	P.	Rs.	A.	P.	
1st Class Carriage.	8,663	217	0	11	134	15	9	0	0	2·99	
2nd do	15,023	105	3	2	64	6	1	0	0	0·82	
3rd do	45,922	369	2	3	230	8	2	0	0	0·96	
Luggage Van.... Break Van.......	11,491 } 1,170 }	83	11	1	34	6	8	0	0	0·5	
Horse Box.......	6,814	55	11	6	51	14	4	0	0	1·4	
Carriage Truck	3,225	0	0	0	0	0	0	0	0	0	
					516	3	0				

Note.—The Mileage (8,242), and cost of repairs (Rupees 95-10-6), of composites have been distributed between the 1st and 2nd class vehicles, one third for the 1st and two-thirds for the 2nd. In this statement, the actual cost of repairing the several description of carriages has been given for the six months, but for three months the aggregate cost only is known. This latter has been distributed over the several description of vehicles, in the same proportion as is shown to have obtained during the six months.

T. T. PEARS,
Consulting Engineer for Railways.

APPENDIX E.

PASSENGER TRAFFIC.

GENERAL MANAGEMENT.

Total Expenditure.............................. Rupees 2,445–10–4
Total Mileage of vehicles.......................................92,308
Average cost per vehicle per mile........................Pies 5·086

Mileage charge per passenger.

1st Class.. Pies 2·11
2nd do. .... „ 1·15
3rd do. .... „ 0·17

T. T. PEARS,
Consulting Engineer for Railways.

APPENDIX F.

MADRAS RAILWAY.

Goods Traffic.

Open 65 miles from Madras to Arcot.

Revenue Account (Three Months) from 1st October to 31st December 1856.

"Payments."	Rs.	A.	P.	Rs.	A.	P.
To Locomotive Department.—Salary of Superintendent and Office expenses	876	1	0			
Foremen, Enginemen, and Firemen's wages	2,194	8	4			
Wages of Laborers, Cleaners, &c.	297	7	2			
Coke and Coal consumed	4,144	6	4			
Oil, Tallow, Waste, &c	293	2	11			
Materials for repairs of Engines and Tenders.	421	11	0			
Wages for do	951	14	10			
				9,179	3	7
Repairs of Carriages and Waggons.						
Superintendence	103	6	5			
Wages	404	14	0			
Stores	330	11	5			
				838	15	10
To Traffic Department.						
Salaries of Traffic Manager and Assistant Station Masters and Clerks	2,019	0	9			
Salaries of Guards	449	11	4			
Wages of Porters, Greasemen, &c	1,270	9	10			
Wages of Gatemen, Pointsmen, &c	376	0	2			
Cost of Tallow, Grease, and Waste	2,277	0	0			
Cost of Oil in lighting Stations and Signals, and for the use of Pointsmen, &c	135	14	0			
Advertising, Printing, and Stationery	419	8	8			
Cost of Stores not otherwise classified	23	11	2			
Travelling expenses and allowances	99	14	8			
Contingent charges and Petty Disbursements.	2	2	4			
				7,073	8	11
To General Charges.						
Agent and Manager, Cashier, Audit and Accountant, and Office and Expenses				1,222	13	1
Total Expenditure				18,314	9	5
Receipts for three months				34,141	2	5
Profit, Rupees				15,826	9	0

T. T. PEARS,

Consulting Engineer for Railways.

APPENDIX G.

GOODS TRAFFIC.

3 Months, October, November, and December, 1856.

LOCOMOTIVE DEPARTMENT.

Locomotive Engines.

Miles run with trains...	10,088¼
Piloting and Shunting	266¼
Total...	10,354½

Expenses.

Foremen, Enginemen, and Firemen's Wages...		2,194—8—4
Cleaners, Cokemen and Watermen		297—7—2
Coke, cwt. 2,901		4,061—5—7
Coal, do. 75½...		83—0—9
Oil, Tallow, &c		293—2-11
Repairs.		
Engines..... Material	420—2—4	
Engines..... Wages	949-13—7	1,369-15-11
Tenders..... Material	1—8—8	
Tenders..... Wages...	2—1—3	3—9-11
Superintendence, &c.		876—1—0
Total Locomotive Expenses, Rupees...		9,179 3 7

Total per train mile.	Rupees	0	14	6·69
Fuel per train mile...	lbs.			33·04
Do. per Engine mile	lbs.			32·19
Cost of Fuel per train mile	Rupees	0	6	6·87
Do. per Engine mile	,,	0	6	4·84
Average weight of train gross..	Maunds			557·8
Do. do. do. inclusive of Engine and Tender ...	Maunds			6394·5
Average Locomotive expenses per maund gross per mile ...	Pies			0·031
Average Locomotive expenses per maund gross per mile, including Engine and Tender...				0·027
Average cost of fuel per maund gross per mile				0·014
Do. do. do. including Engine and Tender				0·012
Repairs of Engine and Tender per mile run, exclusive of office expenses and Superintendence.				25·4

Average gross weight of each Vehicle.

	Weight of Vehicle.	Average load.	Gross Weight.
Covered Goods Wagons.	218	87·5	305·5 Maunds.
Open Sided do.	150	87·5	237·5 ,,
Open Goods do.	150	87·5	237·5 ,,
Platcform do.	136	87·5	223·5 ,,
Hopper Coal do.	170	87·5	257·5 ,,
Coke do.	177	87·5	264·5 ,,
Cattle do.	204	87·5	291·5 ,,
Timber Trucks...	136	87·5	223·5 ,,

Locomotive expenses per Vehicle per mile.

Covered Goods Wagons...	Pies	9·4705
Open Sided do.	,,	7·3625
Open Goods do.	,,	7·3625
Platform do.	,,	6·9285
Hopper Coal do.	,,	7·9625
Coke do.	,,	8·1995
Cattle do.	,,	9·0365
Timber Trucks...	,,	6·9285

Locomotive expenses per maund net per mile. ... ... ,, ·104

T. T. PEARS,

Consulting Engineer for Railways.

NOTE.—82$\frac{2}{7}$ lbs. Avoirdupois= 1 Maund.
27·219 Maunds = 1 Ton.

APPENDIX H.

GOODS TRAFFIC.

3 Months, October, November, and December, 1856.

Traffic Department.

BOOKED.

1st Class Goods...	Maunds	3,72,022
2d do.	,,	33,305
3d do.	,,	8,435
	Total..	4,13,762

Average distance travelled by each.

1st Class... ... ...Miles 38·85
2d do. ... ... „ 58·24
3d do. ... ... „ 61·94

Mileage.

1st Class 1,44,54,164
2d do. 19,39,708
3d do. 5,22,472

Total Mileage...1,69,16,344

Receipts.

1st Class ... ...Rupees 25,537—7—4
2d do. ... ... „ 5,834-13—5
3d do. ... ... „ 2,597—0—5

Total Goods, Rupees...33,969—5—2

Miscellaneous... 171-13—3

Receipt per maund booked.

1st Class.. ... ... Anna 1—1·18
2d do. ... . Annas 2—9·6
3d do. ... ... „ 4-11·11

Trains.

Mileage of trains... 10,083
Average number of Vehicles per train ... ...19·169
Receipt per train mile... ... ... Rs. 3·38

Average constitution of Train.

Covered Goods Wagons... ... ...10·19
Open Sided do. ... ... 1·30
Open Goods do. ... ... 5·37
Platform do. ... ... 0·75
Hopper Coal do. ... ... 0·02
Coke do. ... ... 0·09
Cattle do. ... ... 1·13
Timber Trucks... ... ... 0.29
Ballast do. ... .0·029

19·169

Average lead of train... ... ... 1677·7 Maunds.
Average weight of train... ... ...5578· „

Vehicles.

Mileage of	
Covered Goods Wagons	1,02,756
Open Sided do.	13,151
Open Goods do.	54,111
Platform do.	7,558
Hopper Coal do.	197
Coke do.	917
Cattle do.	11,365
Timber Trucks	2,980
Ballast do,	290
	1,93,325

Average load of each vehicle ... 87·5
Average earnings per Vehicle per mile... As. 2 10
Total expenditure... Rupees 7,073 8 11
Total Mileage of Maunds... 169,16,344
Total Mileage charge of Goods per maund net... Pie ·0802

T. T. PEARS,
Consulting Engineer for Railways.

NOTE.—82 2/7 lbs. Avoirdupois = 1 Maund.
27·219 Maunds = 1 Ton.

APPENDIX K.

GOODS TRAFFIC.

CARRIAGE DEPARTMENT.

Statement showing the Mileage of Vehicles, and Cost of Repairs, for the 3 Months of October, November, and December, 1856.

Name of Vehicles.	Mileage.	Cost of 6 Months.			Repairs for 3 months.			Average Cost of Repairs per Md. mile.	Remarks.
		Rs.	A.	P.	Rs.	A.	P.	Pies.	
Covered Goods Wagons.	1,02,756	562	0	4	377	1	8		
Opened Goods Wagons.	67,262	257	15	10	172	8	8		
Cattle Wagons............	11,365	76	14	9	51	1	5		
Coke Wagons............	917	17	1	11	11	6	6		
Coal Wagons.............	197	71	1	2	47	10	3	·0095	
Platform Trucks.........	7,558	12	6	10	8	1	3		
Timber Trucks..........	2,980	2	4	5	1	5	11		
Goods Break Vans.......	...	253	1	10	169	12	2		
Ballast Trucks...........	290	...	...	...	...	...	...		
					838	15	10		

T. T. PEARS,

Consulting Engineer for Railways.

NOTE.—Vide Note to Appendix D.

APPENDIX L.

GOODS TRAFFIC.

GENERAL MANAGEMENT.

Total Expenditure.....................................Rupees 1,222-13-1

Total Mileage of vehicles......... 1,93,325

Average cost per vehicle per mile........... ....1·2 pie.

Average mileage charge per maund net..............................·0137 pie

T. T. PEARS,

Consulting Engineer for Railways.

APPENDIX M.

Statement showing the description, weight, and capacity of Rolling Stock, in use on the Madras Railway.

	Weight Maunds.	Full load Passengers.	Full load Maunds.	Capacity Cubic feet.
Engine with tender Passenger,	1,091	0	0	0
Tank Engine do.	682	0	0	0
Engine with tender goods,...	1,091	0	0	0
Tank do.	682	0	0	0
1st Class Carriage,...	241	24*	36	0
Composite,...	237	A	0	0
2d Class Carriage,...	225	40	60	0
3d do.	174	60	90	0
Passenger break Van,... ...	184	0	0	663
Horse box,...	231	0	3 Horses=27 md.	0
Opensided goods Wagon, ...	150	0	163	800
Covered do.	218	0	191	623
Open do.	150	0	163	800
Goods break Vans,... ...	272	0	0	614
Cattle Wagon, ...	201	0	191	796
Carriage Truck,..	136	0	one 4 wheel=15 mds	0
Coke Wagon,...	177	0	191	478
Coal Wagon, ...	170	0	163	163
Open or Ballast Wagon, ...	150	0	0	0
Platform, ...	136	0	163	0

* 1½ maund weight of a passenger.

T. T. PEARS,
Consulting Engineer for Railways.

NOTE.—82⅜ lbs. Avoirdupois=1 Maund.
27·219 Maunds =1 Ton.
A—load varies with the description of Carriages.

APPENDIX B.

Memorandum by certain merchants at Vellore, delivered to Mr. Sullivan, Sub-Collector.

To The Madras Railway Authorities.

1. We, the undersigned chief merchants of Vellore, beg respectfully to submit the following application, praying for certain alterations and modifications of the Railway Rules, now in force, in connection with fares, &c.

2. The present rules, for the accommodation of passengers by the Railway, are framed without reference to caste or sex. The fares fixed for passengers are heavy, and the rates established for the conveyance of goods are also, in some respects, heavy.

3. The mixing together of Males and Females of caste in the same carriage inconveniences them and hinders many from travelling; the high rates inconvenience passengers with small means and hinder many from travelling; this latter cause also prevents merchants sending goods *generally* by Railway.

4. We would, therefore, propose that there should be separate carriages, or compartments, for the Males and Females of the four principal Hindoo castes in common viz., Brahmins, Kshatryas, Vyseyas, and Soodras, and that the same accommodation for the separation of the sexes should be furnished for the Mahomedans and all other castes, &c.

5. We would propose the following modification of Railway passenger fares.

1st Class at 1 Anna per mile per head.
2d Do. at 6 Pies per do. per do.
3d Do. at 2 Pies per do. per do.

6. The present 3rd class Railway Carriage requires to be fitted with moveable wooden shutters, as the tarpaulin blinds afford no protection.

7. We have observed that, in the goods waggons, sugar bags are frequently packed up with the other goods, which from its moist nature tends to damage them; we would suggest that holes 6 inches apart may be made through the bottom of the waggon, where the goods are placed, for the discharge of the moisture.

8. At present, a terminal charge of 8 Annas per 32 Bengal Maunds is made; we would suggest the following modification of this rule.

					Rs.	A.	P.
Goods up to	4 Maunds			....	,,	1	0
above	4 up to		8 Maunds	...	,,	2	0
,,	8	,,	12	,, ...	,,	3	0
,,	12	,,	16	,, ...	,,	4	0
,,	16	,,	20	,, ...	,,	5	0
,,	20	,,	24	,, ...	,,	6	0
,,	24	,,	28	,, ...	,,	7	0
,,	28	,,	32	,, ...	,,	8	0

We would suggest that the following goods now included in the 3d class be transferred to the 2d class.

Cocoanut Kernels.	Pepper.	Raw Hides.
Stationery.	Tobacco.	Raisins.
	Camphor.	

That the following goods now included in the 3d class be transferred to the 1st class.

Indigenous Fruit.	Ginger.	Turmeric.	Fish and Game.

That the following goods now included in the 2d class be transferred to the 1st class.

Bales of Woollen and Cotton Piece.	Axletrees.	Potatoes.
Brooms Common.	Iron plates, rods, &c.	Sugar.
Coarse Cloths.	Bolts.	Sugar Canes.
Iron Vessels.	Nails.	Tobacco.
Iron Vessels not exceeding 30Mds. in weight.	Tools and Implements.	Vegetables.
	Molasses.	
	Onions.	

In conclusion, we beg to state we are confident that by altering the present Railway rules, in accordance with the above suggestions, very great advantage will accrue to the Railway Company.

(Signed by)

1. SEETHARAMAH MOODELLY.
2. KALOO LALAH.
3. GOINDOO MOODELLY.
4. PAREYATANUM CUNDAPAH CHETTY.
5. VAROODAPAH CHETTY.
6. PATAIL YACOOB SAIB.
7. TANEYACHELLA CHETTY.

Wholesale Merchants of Vellore.

(Translation.)

(Signed) A. W. S.

(True Copy)

(Signed) T. T. PEARS,

Consulting Engineer for Railways.

APPENDIX C.

No. 1. Trunk Road 2nd Division.

Abstract Statement showing the Traffic, passing along the undermentioned line of Road, viz., Woocherry, Arcot, Vellore, Pullicondah, Ambore, and Vaniembady for the month of April 1857.

	Elephants.		Carts.		Camels.		Horses.		Donkeys or Mules.		Horned cattle.		Sheep or Goat.		Porters.		European foot Passengers.		Native foot Passengers.		Palkeys or litters.		Spring carriages.		Artillery Guns or carriages plat-form cart.		Women.		Remarks.
	Laden	Unladen	Laden	Unladen	Laden	Unladen	Laden	Unladen	Laden	Unladen	Laden	Unladen	Laden	Unladen	Laden	Unladen	Laden	Unladen	Laden	Unladen	Laden	Unladen	Laden	Unladen	Laden	Unladen	Laden	Unladen	
Woocherry...	24	18	1,596	681	68	50	237	227	278	355	506	3,022	0	1,345	804	2,833	0	47	22	170	16	445	22	27	0	0	342	1,285	1st 8th 15th 22d
Arcot...... ...	25	11	529	166	217	372	244	188	368	133	779	300	0	154	128	0	0	25	589	672	28	5	49	34	0	0	2,683	3,998	Do.
Vellore..	16	11	515	252	115	81	498	371	696	614	866	721	0	680	2,613	566	5	72	550	1,519	67	56	121	84	0	0	2,881	1,827	Do.
Pullicondah ..	0	0	669	82	0	0	103	89	119	25	157	50	0	110	831	448	0	11	118	325	3	0	26	4	0	0	843	1,491	Do.
Ambore.. ...	37	6	433	132	44	21	579	142	193	6	1,505	910	0	13,027	518	1,582	23	54	1,744	1,506	236	391	43	26	13	3	3,757	4,464	Do.
Vaniembody..	10	16	331	185	113	0	307	201	1,011	227	134	4,101	0	4,577	1,533	1,203	85	51	218	2,544	15	16	15	16	0	0	5,191	6,933	Do.

Camp Agarum River,
24th April 1857.

(True copy.)
(Signed) I. O. MAYNE, Lieut.,
Acting Dt. Engineer North Arcot.

(Signed) W. BARBER, Captain,
Ex. Engineer of North Arcot.

(Signed) E. F. SHOPMAN,
Asst. Overseer D P. W. *North Arcot,*

(True copy.)
(Signed) T. T. PEARS,
Consulting Engineer for Railways.

(A true copy.)
(Signed) C. C. JOHNSTON, Captain,
Acting Superintending Engineer Northern Circle.

APPENDIX D.

MADRAS RAILWAY,
MADRAS, 31ST JANUARY 1857.

No. 87.

FROM MAJOR T. A. JENKINS,
Agent and Manager.

TO LIEUTENANT T. T. PEARS, C. B.
Consulting Engineer for Railways.

SIR,

I have the honor to annex for your information a copy of a letter from the Traffic Manager, No. 6, dated the 28th instant, in which he states that some few months ago, finding that Cotton was only conveyed by Railway to a limited extent, he was led to enquire into the cause of the same, when he found that the rate as laid down, viz., $\frac{1}{4}$ of a pie for every three cubic feet per mile, from the loose packing of the cotton, amounted to a sum much larger than was anticipated, in comparison with other charges. He also found that the Native merchants had an objection to sending goods by measurement; he therefore, in communication with the Merchants and at their suggestion, adopted as an experiment, that cotton should be carried as dead weight, but at 2nd class rate.

2. I beg to recommend that pending the revision of the rates, that which has been found to answer so well for cotton, may be allowed by the Government to be continued.

I have, &c.,
(Signed) T. A. JENKINS,
Agent and Manager.

Submitted (with Report) for the orders of Government.

(Signed) T. T. PEARS,
Consulting Engineer for Railways.

Madras, 3rd March 1857.

TRAFFIC MANAGER'S OFFICE,
MADRAS, 28TH JANUARY 1857.

No. 6.

TO MAJOR T. A. JENKINS,
Agent and Manager.

SIR,

Referring to your letter No. 1 of 2nd Instant having reference to the conveyance of cotton, I beg to observe that the first lot of cotton was conveyed by Railway on the 14th August, from Arcot to Madras, consisting of 118 bags, and upon charging for it according to the classifi-

cation of Goods, which provides that "First class Goods will be conveyed from station to station at the rate of one fourth of a Pie per Indian maund per mile, provided they do not measure more than 3 cubic feet per maund weight; if in excess of that limit, they will be charged by measurement at the rate of one fourth of a Pie per mile for three cubic feet" we found that the charge by Railway was equivalent in that case to Rupees 9-12 per Ton.

2. The Consignee informed me, that no more cotton could be forwarded by Railway at such a rate, and upon making further enquiry amongst the merchants, the information I received corroborated the opinion expressed by the Consignee of the first lot, and I found that no more cotton was sent by Railway..

3. I visited Wallajapett and had an interview with 21 of the principal Merchants there and was told that 45 Madras Maunds of cotton were conveyed by bandy to Madras, for Rs 4, being equivalent to rather less than Rs 8 per Ton. I knew this rate by road, as stated, to be correct from other sources of information.

4. The Wallajapett Merchants, proposed various rates to be charged by Railway for the conveyance of cotton. In the first instance they suggested that it should be charged by dead weight in the first class and not by measurement, and a lengthened conversation on the subject was held.

5. They appeared to be anxious that a rate should be tried experimentally, without reference to measurement, by sending a quantity by Railway then standing loaded in the streets. I consented to the experiment being made, provided they would pay Rs 5-1-8, per Ton, being the rate for 2nd Class Goods, to which after considerable hesitation they agreed.

6. I beg to observe that the experiment has proved so far successful in diverting this Traffic from the Road to the Railway, as the quantity conveyed experimentally has been as follows.

23rd September to 30th	1418	Maunds.
October	1706	do:
November	1077	do.
December	5024	do.
to January 24th	4315	do.

from the opening of the Line in July to 23rd September, we had carried only 308 Maunds of cotton altogether.

7. I beg to observe that an open Goods waggon will carry on an average 25 Bales averaging $2\frac{1}{4}$ Cwt. each, or Tons 2-16-1 per wagon at 5 1-8 per Ton Rupees 14—5—5.

8. A coke Wagon carries from 28 to 30 Bales or (taking the minimum quantity) Tons 3-3-0 yielding Rupees 16-1-3.

9. I am aware that the experiment is an irregularity. I trust however that the Sanction of Government will be obtained for the experiment being continued, until a revision of the Rates generally may be decided upon.

10. I beg to inform you that we find that there are 312 cubic feet of cotton to a Ton, as at present packed, and that according to the present mode of charging the rate would be Rupees 10-4-8 per ton.

I have, &c.,

(Signed) H. A. FLETCHER, *Traffic Manager.*

(True Copy)

(Signed) T. A. JENKINS, *Agent and Manager.*

No. 142.

To MAJOR T. A. JENKINS,

Agent and Manager.

SIR,

I have the honor under the orders of Government, to acknowledge the receipt of your letter No. 87 of the 31st ultimo, forwarding copy of a report from your Traffic Manager, upon the conveyance of cotton raw by rail.

2. From this the Government learn, that according to the charge laid down for this article in the published Tariff, tho' placed in the 1st or cheapest class, the Natives can carry it cheaper by the high road on common carts.

That the reason of this is found in the great bulk, in proportion to its weight, of the article in question, rendering the charge by measurement laid down in the Table, *viz.*, 3 feet the maund, prohibitory; that you recommend, as a remedy raising it from the 1st or cheapest, to the 2d class, and carry it there by weight; and lastly that your Traffic Manager has actually caused a certain quantity—property of certain Individuals, inhabitants of Wallajahnuggur—to be brought down to Madras upon these terms, i. e. at rates lower than those contained in the published Tables.

3. Before passing any orders upon these several subjects, Government would wish you to consider the apparent arguments against your proposal.

4. It is, as you are aware, a matter of the greatest importance to the people of this country, as well as to a large section of the community at home, that raw cotton should be conveyed at the lowest possible cost from the Districts in the interior to the coast. In fact it is not too much

to say, that this was one of the main objects insisted on, as attainable by the introduction of Railways into British India.

5. Cotton was in the table of rates for the Railway, placed in the cheapest class; but for reasons above referred to, you now recommend placing it in a higher class, in which you would carry it as dead weight.

6. You would thus at one blow violate a fundamental principle, by carrying as dead weight an article obviously coming under measurement goods; and you would accomplish that which is a far more serious evil, the permanent raising of the charge for the transport of cotton.

7. You will observe at present that raw cotton can be carried on your rail at $\frac{1}{4}$ pie per maund, per mile, exclusive of Terminal charge. You propose to double this charge by placing the article in the second class, the charge for which is $\frac{1}{2}$ pie per maund, exclusive of Terminal charge.

8. It is quite true, that according to the present mode of packing cotton, the plan you propose might induce dealers to place it on the rail when they would, otherwise, not do so, if the present rates were rigidly adhered to; but the effect would be injurious to both parties, inasmuch as no inducement is held out to the merchants to pack the cotton closer and better, than they do at present.

9. It seems unsound in principle to carry measurement goods by weight; and moreover in this case both parties are likely to be sufferers in the end.

10. You are requested to consider whether it would not be better to keep the cotton in the cheapest class, to adhere to the fundamental principle of distinguishing dead from measurement weight, and to meet the present difficulty by a special measurement for this particular commodity.

11. If, for example, a clause were introduced to the effect that cotton-raw unscrewed, would be charged at 7 (instead of 3) feet the maund, the result would be something as follows.

12. It appears from Mr. Fletcher's statement that about 1,000 feet, 25 bales, of this cotton can be packed in a wagon. Your Locomotive Superintendent gives the load of an open sided wagon at 800 feet. If we take the mean 900 feet, we shall get at the above rate (7 feet the maund) 128 maunds, which will give as the earnings of a wagon, between Madras and Arcot, Rs. 12 10 8. This would probably attract all the cotton, and yield a profit to the Railway at the same time.

13. Under this arrangement the owners would be induced to screw their cotton in the interior. The introduction of such a change would be an advantage to both parties. The Railway would earn more per wagon, as the wagon would hold more; and the cotton merchants would carry a

maund for the same charge they would now, under the system proposed, pay for about 50 lbs.

14. They would be thus enabled, by the exercise of care and foresight, to get their cotton carried at the cheapest rate, which is just one half that at which it would be carried by the system you propose; while your waggons loaded with screwed bales, charged at the lowest rate, would earn (A.1—7 × 160) Rs. 15-13-4, between Arcot and Madras, instead of Rs. 14 5 5, which it appears from your letter is the maximum amount that could be realized, under the system proposed by your Traffic Manager.

Madras, 5th February, 1857.

I have, &c.,
(Signed) T. T. PEARS,
Consulting Engineer for Railways.

(True Copy)
(Signed) T. T. PEARS,
Consulting Engineer for Railways.

MADRAS RAILWAY,
MADRAS, 19TH MARCH 1857.

No. 247.

FROM MAJOR T. A. JENKINS,
Agent and Manager.

TO LIEUTENANT COLONEL T. T. PEARS, C. B.,
Consulting Engineer for Railways.

SIR,

With reference to your letter No. 142 dated the 5th Ultimo, I have the honor to annex for your information a copy of a letter No. 21 dated the 13th of March from the Traffic Manager of this Company, in which he explains at length his reasons in support of his recommendation that cotton be carried by weight and charged in 2nd class. I beg to state that I fully concur in the sentiments expressed by Mr. Fletcher and I again beg to reiterate my recommendations as conveyed in my letter No. 87, dated 31st January, that, pending the revision of the rates, that charge which has been found to answer as an experiment in the conveyance of Cotton may be allowed by the Government to be continued.

I have the honor, &c.,
(Signed) T. A. JENKINS,
Agent and Manager.

Submitted (with observations) for the orders of Government,
(Signed) T. T. PEARS,
Consulting Engineer for Railways.

Madras, 20th March 1857.

TRAFFIC MANAGER'S OFFICE,
MADRAS, 13TH MARCH 1857.

No. 21.

TO MAJOR T. A. JENKINS,
Agent and Manager.
MADRAS RAILWAY.

SIR,

I have had the honor to receive your letter No. 1 of the 9th Ultimo, enclosing letter No. 142 from the Consulting Engineer, referring to the Carriage of Cotton by Railway.

2. Referring to para 2 of the latter the Consulting Engineer states the case correctly. First " that according to the charge laid down " for this article in the published Tariff, though placed in the first or " cheapest class, the natives can carry it cheaper by the high road in " common carts."

Second. " That the reason of this is found in the great bulk in pro- " portion to its weight, of the article in question, rendering the charge " by measurement, laid down in the Table, *viz.* 3 feet the maund prohi- " bitory."

3. In the latter part of this para it is remarked that your Traffic " Manager has actually caused a certain quantity, the property of cer- " tain Individuals, inhabitants of Wallajanuggur, to be brought down " to Madras upon these terms, *i. e.* at rates lower than those contained " in the published table." I think it necessary to observe that the experimental rate for Cotton of Rupees 5-1-8 per Ton, has not been confined to certain individuals inhabitants of Wallajanuggur, but that all Cotton has been charged alike at the same rate.

4. In para 10, the Consulting Engineer observes "you are requested to consider, whether it would not be better to keep the cotton in the cheapest class, to adhere to the fundamental principle of distinguishing dead from measurement weight and to meet the present difficulty by a special measurement for this particular commodity.

5. I stated in para 3 of my letter No. 6 of the 28th January that I had an interview with 21 of the principal Merchants at Wallajanuggur and was told that 45 Madras maunds of cotton were conveyed by Bandy to Madras for Rupees 4; it was further particularly represented that the Merchants were unaccustomed to forward Cotton by measurement, and that such a mode of computation was inconvenient and not understood, and that carrying by dead weight, would be preferable to them, and I may add that their objection to measurement seemed so

decided, that I was convinced that if *insisted upon, it would become an* impediment to cotton being forwarded by Railway at all.

6. I did not overlook the advantages which a decrease in the bulk of the article in proportion to its weight would have upon the Railway Company as carriers on one hand, or upon the charge to be made to the dealers on the other; nor that both parties would be benefitted if the Cotton could be pressed. I was quite aware that carrying Cotton by dead weight did not hold out the inducement for pressing it which a charge by measurement might be supposed to do; but upon considering the subject in all its bearings, and after obtaining all the information I could, I felt convinced then, as I do now, that no inducement we could offer by establishing a charge by measurement could meet the difficulties attendant upon pressing cotton in the interior.

7. As the subject is one of great importance, as remarked by the Consulting Engineer in para 4. of his letter, not only "to the people "of this country and a large section of the community at home," but to the Railway Company also, I think it right to enter into the subject fully, and to state what the difficulties attendant upon pressing cotton up country are.

8. Cotton is produced by the Ryots in such small quantities, that they could not, in the first instance, incur expense of a Press. If they could incur such an expense, the dealer into whose hands it passes would require to see the article pressed, to guard against fraud. Pressing by the Ryot therefore seems to me quite impossible.

9. The native merchants or bazaar men of the villages in the cotton districts cannot obtain a sufficient quantity of the article to induce them to incur the expense of a press. If the few native buyers of cotton in each bazaar or in each village obtained a press for their joint use they would scarcely be able to purchase a sufficient quantity to remunerate them for the expense of a press. If, however, they could afford to obtain a press; the merchant purchasing from them would, as in the former case, require to see the cotton pressed to prevent fraud.

10. You will perceive that cotton passes through the hands of the ryot, thence through the bazaar men of his village or district, again through the merchant at such a place as Wallajanuggur; and again through a broker to the merchant in Madras or Pondicherry; very frequently it passes through more hands than I now enumerate, but none of these several parties have the slightest confidence in each other.

11. If cotton were pressed by the ryot, the bazaar man must open and press it again, the native Merchant must do the same, and again the buyer in Madras would pursue the same course; in short, it appears

indispensably necessary that each bag of cotton should be opened and inspected by every person through whose hands it passes in order to ensure that the bulk is equal to the sample, and as a protection from fraud. You will thus perceive that all these several persons would require presses to insure the article being press-packed.

12. The difficulties in the way of press-packing cotton up-country are sufficiently formidable as they stand, but there remains a difficulty beyond all these, and which I fear we shall never be able to surmount, *viz.*, that Cotton for shipment should be pressed and immediately shipped —if it be pressed any length of time before shipment, the bulk would be increased, and the shipper would lose considerably thereby; this can be well understood—a bulky article of the nature of Cotton would naturally expand after being press-packed, and I am informed that it would entail a considerable loss upon the shipper, were cotton pressed up-country and shipped some 8, 10, or 12 days afterwards; hence the aim of the shipper is to press the Cotton, measure, and ship immediately.

13. Freights from Madras vary to some extent, but when we consider that 50 feet of Cotton as pressed here is carried as a Ton, and that the Ton so carried weighs in reality only about 1425 ℔ and that £3-10-0 to £5 per Ton is often paid for freight, we may be assured that every inch in a bale is of greater importance than the pressing of cotton to cheapen land carriage, when such pressing would make it more expensive by sea; the former carriage being very cheap in comparison with the latter.

14. It may appear feasible that the Madras Merchant, the shipper, could send his own Agent into the Cotton Districts, and placing confidence in him, entrust him to purchase the articles, sample it, and press-pack it; and that the objection as stated in the preceding paras could be met by re-packing in Madras before shipment.

15. If the Madras houses could break through the mysteries of Native Agency, and purchase direct from the Ryot, doubtless much would be effected for the good of the country, and every interest connected with it, but any one at all acquainted with the mode of doing business in India must know that many years must elapse before such a desideratum can be brought about.

16. But supposing that the Madras Merchant had commenced to purchase directly from the Ryot, I think it must be long ere he would be induced to send an Agent capable of selecting and sampling cotton into the scattered cotton districts, as the quantity, when divided amongst the different houses, would not justify the expense.

17. I am informed that the Surat and *Berar cotton is press packed* in the city of Bombay, that the cotton grown in Bengal *is press packed* in Calcutta, that Tinnevelly cotton is pressed in the *Town of Tinnevelly*, and that American grown cotton is principally pressed at the ports. If such be the case, I think it is equally reasonable to assume that cotton grown in the Presidency of Madras will be press packed in Madras, unless there be some reasons operating in favor of pressing the cotton grown in this Presidency up country, with which I am at present unacquainted.

18. I fear, under these circumstances, that no advantage would result to our carrying cotton by measurement rather than by dead weight, as no inducement we could offer by affording a cheaper rate by pressing could surmount the difficulties with which such an operation is at present surrounded.

19. I think the introduction of a method new to the dealers of carrying 3 or 7 cubic feet per maund of 82$\frac{2}{7}$th lbs. each would present a difficulty to their minds, which although easily understood by us it would not be very easy for them to comprehend, and I think the slight variations in the charge by measurement from one lot of cotton being a little less bulky than another, would create dissatisfaction on their parts, and create an impression that the Railway charge varied without any apparent reason—whilst the charge per Bandy on the Road remained always the same, and was thoroughly understood by them, and as easily checked.

20. With reference to paras 6 and 9 of the Consulting Engineer's letter, No. 142, wherein it is observed, "you would thus at one blow "violate a fundamental principle by carrying as dead weight an article "coming under measurement goods," and "It seems unsound in "principle to carry measurement goods by weight, and moreover both "parties are likely to be sufferers in the end," I may observe that, according to our classification of Goods, articles of different specific gravities are carried at the same rate and in the same class, and that so long as the maximum weight in each waggon of 7 Tons can be carried, it is matter of little importance to the Railway Company what the particular specific gravity of the article carried may be.

21. The fundamental principle of carrying by dead weight or measurement is different in different cases. You will find on reference to the Tonnage Schedule sanctioned by the Chamber of Commerce of Madras, that many articles which would be charged by dead weight upon a Railway, and all alike at 20 cwt. to the Ton, are carried upon a different principle in Ships—dead weight varies, and is carried as 8 cwt. 10, 11, 12, 14, 15, 16, 17, 18, and 20 cwt. to the Ton. The standard

for measurement seems throughout to be 50 cubic feet per Ton for every article carried by measurement.

22. In carriage by ships it appears that they vary in the weight allowed as a Ton in very many of the articles specified—in measurement they adhere strictly to the one standard of 50 cubic feet per Ton—for every article carried by measurement; thus, Arrow-Root in cases, Apparel, Books, Cotton in Bales, and Cotton piece Goods, and a variety of articles, are all carried as 50 cubic feet per Ton.

23. To avoid breaking through a Rule on the Railway of carrying Goods which exceed the bulk allowed per Ton or Maund by dead weight, the Consulting Engineer proposes to allow 7 Cubic feet of cotton to be carried as a maund instead of 3 Cubic feet; this would be to extend the limit allowed in this particular case from 81 Cubic feet per Ton to 190 Cubic feet per Ton, which I should regard as being more objectionable in practice, as establishing a totally distinct standard of measurement, or method of computing the charge by Railway, than in this particular case, falling back to one of the two methods, already established, of charging the article as we charge nearly all we carry, by the well known standard of 20 cwt. to the Ton.

24. No fundamental principle would in reality be departed from by allowing cotton, although at present falling under the Goods to be carried by measurement, to be carried by dead weight, inasmuch as it would be carried upon a principle wide in its application upon the Railway, whilst the establishment of a new standard of measurement would directly invade the fundamental principle in regard to that measurement already laid down.

25. The Consulting Engineer remarks as follows, para 5, "Cotton "was in the Table of Rates for the Railway placed in the cheapest class, "but for reasons above referred to you now recommend placing it in a "higher class, in which you would carry as dead weight." Para 6, "you "would accomplish that which is a far more serious evil, the permanent "raising of the charge for the transport of cotton." Para 7, "you will observe, at present, that raw cotton can be carried on your Rail at ¼ Pie "per maund per mile, exclusive of Terminal charge, you propose to "double this charge by placing the article in the 2nd class, the charge "for which is ½ Pie per maund, exclusive of Terminal charge." Para 8, "It "is quite true, that according to the present mode of packing cotton, the "plan you propose might induce dealers to place it on the Rail, when they "would otherwise not do so, if the present rates were rigidly adhered to."

26. I beg to observe that para 8 appears to me to furnish a complete answer to the paras above quoted from the Consulting Engineer's letter.

Cotton was placed in the cheapest class, but it turned out, that the rate for measurement, of 3 feet per maund, placed it higher than the highest class when carried by dead weight.

27. I have proposed to carry Cotton at Rupees 5-1-8 per Ton, instead of as it stood, *viz.* from Rupees 9-12-0 to 10-4-8 per Ton, which, instead of accomplishing the permanent raising of the rate, is a practical, and so far a successful, reduction of the charge upon this article.

28. I cannot quite understand the observation of the consulting Engineer "that Raw Cotton can be carried on your Rail at ¼ Pie per Maund per Mile, exclusive of Terminal charge." The charge, as it stood in the classification, was very considerably higher, and the charge I have recommended is double that rate. I cannot think that Cotton can ever be carried at so low a rate with advantage to the Railway Company.

29. In proposing to double this charge of a ¼ Pie per Maund per Mile, by placing the article in the second class, I, in fact, proposed to reduce the charge fully or nearly 50 per cent, bringing the article, I believe, precisely within the rate at which it can be judiciously carried by the Company, and which it is capable of bearing, securing, at the same time that the article is forwarded by Rail and not on the Road by Bandy.

30. The plan proposed has induced dealers to place it on the Rail when they would not otherwise do so if the present rates were rigidly adhered to, and I venture to hope that the Government will be pleased to sanction a measure, although experimentally, tried irregularly, which has succeeded, and if continued will succeed still further.

31. With reference to paras 11, 12, and 13, the Consulting Engineer proposes that a clause should be introduced to the effect that Cotton raw unscrewed should be charged at 7 instead of 3 feet the Maund, and gives the result as follows, Para 12. "It appears, from Mr. "Fletcher's statement, that about 1000 feet (25 bales) of this Cotton can "be packed in a waggon. Your Locomotive Superintendent gives the "load of an open-sided waggon as 800 feet. If we take the mean, 900 "feet, we shall get at the above rate (7 feet the Maund) 128 Maunds, "which will give, as the earnings of a waggon between Madras and "Arcot, Rupees 12-10-8. This will probably attract all the Cotton, "and yield a profit to the Railway at the same time."

32. I observed, para 7 and 8 of my letter No. 6, of the 28th January, as follows.

Para 7. "I beg to observe that an open goods Waggon will carry on an average 25 bales, averaging 2¼ cwt. each, or Tons 2-16-1 per waggon, at 5-1-8 per Ton, Rupees 14-5-5."

Para 8. "A coke waggon carries from 28 to 30 Bales, or (taking the minimum quantity) Tons 3-3-0, yielding Rupees 16-1-3."

33. I beg now to place before you the two methods of carrying cotton, i. e., the plan I propose by dead weight, and the plan proposed by the Consulting Engineer by measurement, taking 7 cubic Feet as a maund, they stand relatively thus.

Plan proposed by dead weight.										Plan proposed by the Consulting Engineer by measurement.					
Description of Waggon.	Bales: Number.	Bales: Weight each cwt.	Weight per Waggon			Rate per Ton.	Amount			Cubic feet.	Equivalent in maunds allowing 7 Cubic Feet per maund.	Rate per maund.	Amount.		
Open Goods.	25	$2\frac{1}{4}$	2	16	1	$5\frac{1}{8}$	14	5	5	877	$125\frac{2}{7}$	$\frac{1}{7}$	12	6	4
Coke Wagons.	28	0	3	3	0	0	16	1	3	982	$140\frac{2}{7}$	0	13	14	1
Do.	30	0	3	7	2	0	17	3	7	10,53	$150\frac{3}{7}$	0	14	14	1

34. It is shewn that the rate proposed by me would at present yield more per waggon than that proposed by the Consulting Engineer. and I cannot think that we should, under present circumstances, be called upon to incur a sacrifice of from annas 15 to Rupees 2-9-11 upon every waggon, according to its description, carrying cotton over the Railway.

35. The Consulting Engineer observes, para 13, "that under such " an arrangement as he proposes the owners would be inclined to screw " their cotton in the interior. The introduction of such a change would " be an advantage to both parties—the Railway would earn more per " waggon as the waggon would hold more, and the cotton merchants " would carry a maund for the same charge they would now, under the " system proposed, pay for 50 lbs."

36. I submit to you that for the reasons which I have adduced, the screwing of cotton in the interior, if it ever comes into operation at all, cannot be brought about for a very considerable period of time: in the meantime, I think a system of carriage based upon measurement would throw difficulties in our way without effecting the object intended, *viz.*, to induce the dealers to screw their cotton in the interior.

37. I think it advisable, however, assuming that cotton could be screwed with advantage to the dealers therein, to consider the effect it would have upon us as carriers.

38. You perceive that the waggons used for the conveyance of cotton carry by dead weight, and earn as follows.

	Tons	Cwt.	Qr.	R.	A.	P.
Open Goods	2	16	1	14	5	5
Coke waggon	3	3	0	16	1	3
do. do.	3	7	2	17	3	7

39. Cotton is screwed in Madras so that 50 Cubic feet weigh, on an average, 1425 lbs. It follows, therefore, that there would be 78 Cubic feet in a Ton Avoirdupois of 2240 lbs.

40. If Cotton were screwed, as suggested by the Consulting Engineer, 7 Tons would consist of 7 × 78 = 546 Cubic feet, and our receipt per Waggon containing 7 Tons, according to the measurement proposed, would be Rupees 7-11-6, instead of Rupees 35-11-8 between Madras and Arcot: that is that the Railway would receive, by such a system, something less than one half the rate at which we carry the lowest class of Goods, according, even to, the scale ordered to be adopted by the Government.

41. You will observe that, whilst it is proposed that the system to be pursued by measurement in the carriage of Cotton, shall be that which would induce the dealers to screw their Cotton, so that they might (taking the calculation of the Consulting Engineer) carry a Maund for the same charge they would now, under the system I proposed, by dead weight pay for about 50 lbs, the Railway Company are to receive no benefit from any change effected by an improved method of packing the article, but on the contrary, are to carry an increased weight for very much less money.

42. I think it would be much more simple and infinitely better to introduce a system by which the grower, the dealer, the merchant, and the carrier should all participate in the advantages, and all pull together for mutual good. I submit to you that such would not be the case by admitting the principle laid down by the Consulting Engineer; but by holding out the inducement that Cotton would be carried at a lower rate, in proportion as the dealers could pack it more closely, so as to carry a greater weight in each Waggon—say to the extent of 7 Tons—it would act more effectually than the introduction of the plan of measurement proposed.

43. In the 14th para, the Consulting Engineer observes "They "would thus be enabled by the exercise of care and foresight to get their "Cotton carried at the cheapest rate—which is just one half that at which it "would be carried by the system you propose—while your waggons loaded "with screw bales charged at the lowest rate would earn (1 A. 7 P. × 160) "Rupees 15-13-4 between Arcot and Madras, instead of Rupees 14-5-5

" which it appears from your letter, is the maximum amount that could " be realized under the system proposed by your Traffic Manager."

44. You will observe that 160 Maunds at 1-7 would yield Rupees 15-13-4 per waggon between Madras and Arcot, being the equivalent for about 6 Tons of dead weight, and that the Consulting Engineer observes that the amount of Rupees 15-13-4 for 6 Tons would be instead of Rupees 14-5-5 for Tons 2-16-1, which is given as the maximum amount that could be realized under the system proposed by your Traffic manager, 'whereas the minimum amount that could be earned by a waggon on the plan proposed by me, as you will have seen that.

	Tons.	Cwt.	Qr.		Rs.	A.	P.
An Open Goods waggon carries	2	16	1	& earns	14	5	5
A Coke waggon ,,	3	3	0	& earns	16	1	3
and sometimes a Coke waggon ,,	3	7	2	& earns	17	3	7

It is apparent to me that a loss would be entailed upon us at once, whilst, as before stated, the plan proposed would force us, if cotton were screwed, into carrying it at a still greater disadvantage.

45. Having in view the importance of the subject set forth in the 4th para of the Consulting Engineer's letter, I would earnestly recommend that the plan proposed by me may be sanctioned for the present, and be continued until circumstances would justify a change.

46. I know that the plan proposed by me has secured the cotton to the Railway, whilst I feel satisfied that if a scale of measurement had been adopted, we should, to say the least, have had considerable difficulty in arriving at the same result, if indeed it would have been at all practicable.

47. I propose that we should secure the cotton being forwarded by Railway, and to effect this I think it would be unwise to aim all at once in effecting too much, as would be the case if the proposal of the Consulting Engineer should be adopted, as the dealers would very much dislike the plan by measurement; and I cannot think it sound in principle to adopt a plan which would make the benefit derived by the dealer fall altogether on the Railway Company by compelling us to carry 7 Tons of Cotton for less than half the sum which we find we can now obtain for 2 Tons 16 Cwt. 1 Qr.

I have, &c.,
(Signed) H. A. FLETCHER,
Traffic Manager.

(True Copy)
(Signed) T. A. JENKINS,
Agent and Manager.

No. 103.

On a letter from the Agent and Manager of the Madras Railway Company, No. 247 dated the 19th March 1857.

Observations by the Consulting Engineer.

The Agent and Manager forwards a letter from the Traffic Manager on the subject of the conveyance of Cotton by rail, being a reply to a communication from this Office dated the 5th February.

Copy Submitted to Government with the Report No. 73 dated 3d March 1857.

2. As these papers have reference to a subject which Government have resolved to refer to the Honorable Court, I lose no time in submitting them, and shall do so with very few remarks.

Extract Minutes of Consultation No. 131 dated 19th March 1857.

3. After perusing Mr. Fletcher's letter, I see no reason to change, in the slightest degree, the opinions which I have given already on the subject, or to add any thing to the reasonings contained in my letter to the Agent, No. 142, of the 5th February, and my report to Government No. 73, dated 3rd March.

4. It is necessary, however, to avoid the chance of misunderstanding, that I should point out some errors into which Mr. Fletcher has fallen.

5. In para 33, he gives a comparative statement of the earnings by his system and by that proposed by me. In the first place, the amount of earnings by the Railway is not the sole, or primary, consideration by which I should be influenced in arranging such matters. In the next place, in his comparative statement, he allows (by weight) 25 bales to a waggon in his calculation, which is about 1000 cubic feet. The Locomotive superintendent, the proper authority, gives 800 cubic feet as the capacity of such waggons. I allowed 900, which would only give 22 bales. The comparison, therefore, is worth nothing.

6. In para 40 Mr. Fletcher is all wrong again. He says, "if "cotton were screwed, as suggested by the Consulting Engineer, 7 tons "would consist of $7 \times 78 = 546$ cubic feet, and our receipts per "waggon containing 7 tons, according to to the measurement proposed," &c.,

7. Mr. Fletcher ought to have seen at once, (and certainly the last para of my letter read with any care would have shewn him, that it was my meaning) that cotton screwed would be carried as "dead weight." A waggon would, according to the Locomotive Superintendent, carry 160 maunds, and the earnings from that load would be Rupees 15-13-4. The last (47th) para of Mr. Fletcher's letter loses all its force therefore.

8. The Company would thus earn more per waggon, while under the same rule which gave them this advantage, the owner would carry 160 maunds between Madras and Arcot for a trifle more than, according to Mr. Fletcher's system, they could carry (2 Tons-16 Maunds) 70 maunds.

9. With reference to the 24th para, I have to observe that I call the principle of dividing commodities, having more or less of specific gravity, into " dead" and " measurement" weight, " fundamental." A departure from this principle is to be seen in Mr. Fletcher's proposition, but no departure from the same can possibly be involved in the mere varying of its application. This is constantly done in the case of shipping.

10. The principle is maintained, but its application varied, by allowing for different goods different measurement.

11. It will be seen, that the whole of Mr. Fletcher's arguments in favor of placing the cotton in the higher class are based on the assumption, that cotton will never be screwed up country. He would, therefore, carry it on such terms that they shall have no inducement to screw it; and that though they might, by screwing it, carry it with increased profit to the Railway for half the charge which he now proposes, he would deny them the chance of so doing.

12. I believe myself, that when the Railways are extended somewhat further towards the cotton districts, arrangements will be made to screw the cotton in the interior, if any advantage in the carriage can be gained thereby; and if such is the case, it is clear that Mr. Fletcher's proposal involves the raising of the charge for the conveyance of raw cotton 100 per cent, without any advantage whatever to the Railway Company.

(Signed) T. T. PEARS,
Consulting Engineer for Railways.

Madras, 20th March 1857.
To The Chief Secretary to Government,
Fort Saint George.

FINANCIAL RAILWAY DEPARTMENT.

No. 321.

Extract from the Minutes of Consultation under date the 22nd June 1857.

Read the following letter from WILLIAM HAMILTON CRAKE, Esq. Chairman of the Chamber of Commerce; to E. MALTBY, Esq. Acting Chief Secretary to Government, dated 3rd June 1857.

SIR,

1. I have the honor by desire of the Chamber of Commerce, with reference to an Extract from the Minutes of Consultation, dated 11th October 1856, intimating that the present rates for carriage of goods by the Madras Railway were sanctioned on the understanding that they were to be experimental only, and to be in force for one year from the opening of the Line, and to be subject to revision by Government at the expiration of that period; and stating that the changes proposed by the Chamber, in their Chairman's letter of 15th August 1856, in the classification of goods, will be kept in view when the subject of the rates and fares comes again under the consideration of Government; the time for revising the Tariff of Charges for carriage of goods by the Rail having arrived, to renew their representation of the anomalies which exist in the present classification of goods; their objections to the use of the Indian Maund, instead of the English Avoirdupois, as the standard of weight; and their recommendation that the Terminal Charge should be abolished, and a fixed net rate be adopted for each class of goods.

2. That with regard to the first point, *viz.* the classification of Goods, as the Government, in the Extract before mentioned, were pleased to say that the changes proposed by the Chamber will be kept in view when the subject comes again under their consideration, they will not dwell further upon it at present; but that with regard to the two other points, *viz.* the standard of weight and the terminal charge, the Chamber beg respectfully to submit the following observations:

1st. The standard of weight.—Great complaints are made not only by European but also by Native Merchants and Traders against the present system, as involving a most intricate calculation, and they are unanimously in favour of the adoption of the English standard in lieu of it. That such would appear to have been adopted by the Bombay Railway Company, and consequently the Madras Public feel warranted in demanding a similar concession.

2nd. The terminal charge.—This also involves an intricate calculation, and tells heavily upon Goods carried short distances. Its mainte-

nance can be of no possible object, now that the rates for carriage are to be revised, as it can be amalgamated with the latter; the Chamber are therefore induced again to urge its abolition.

3. Whilst on the subject of rates, the Chamber desire briefly to allude to the remarks made by the Consulting Engineer for Railways in his letter to Government, under date of 24th September 1856, a copy of which accompanied the Extract from the Minutes of Consultation now under notice, on the changes proposed by the Chamber. Colonel Pears assumed that the Chamber recommended an increase in the existing rates; but if due regard had been given to the fact that they proposed to transfer a number of articles from the second to the first class, to increase the weight from $82\frac{6}{7}$ to 100 lbs., and to abolish the terminal charge, it would have been found that, although there was an apparent increase in the rates, in reality the Merchant would pay much the same as at present, for the transport of his goods, taking one article with another.

4. The Chamber had occasion, in the latter part of last year, to bring to the notice of the Agent of the Railway, the great inconvenience experienced by the Public under the present arrangement of running the Trains, which does not allow of a passenger proceeding to Arcot and returning to Madras on the same day; and they understand that it was proposed to obviate this by running mixed Trains, instead of separate Passenger and Goods Trains, at the same rate of speed (20 Miles per hour) as for the former; but that the proposition did not meet the sanction of Government. The advantages of such an arrangement, as far as the Public is concerned, are manifest; whilst the Chamber are not aware that the objections to it are of such a nature as to compel Government to withhold their sanction to the measure; they feel assured, however, that the matter will receive the attention it merits when the present working of the Madras Railway shall come again under consideration.

(Signed) WILLIAM HAMILTON CRAKE,

Chairman.

Ordered that the foregoing letter be referred to the Consulting Engineer for Railways for his consideration and report, in connection with the subject of the classification of goods and the revision of the Passenger Fares and Goods Tariff for the Madras Railway.

(True Extract and Copy.)

(signed) E. MALTBY,

Acting Chief Secretary.

To the Consulting Engineer for Railways.

RAILWAY DEPARTMENT,
CONSULTING ENGINEER'S OFFICE.

No. 245.

To E. MALTBY, Esq.

Acting Chief Secretary to Government Fort Saint George.

SIR,

I have the honor to acknowledge the receipt of an Extract from Minutes of Consultation, in the Financial Railway Department, No. 321, dated the 22d June, forwarding a letter from the Chamber of Commerce, and desiring that I would consider and report upon the same, in connection with the subject of the classification of goods, in the revision of the Passengers Fares and Goods Tariff for the Madras Railway.

2. My Report, on the above subject, was forwarded yesterday, prior to the receipt of this order.

3. There appears nothing, however, in the letter from the Chamber that seems to call for notice here, their opinions on the classification and Terminal charge having been kept in view by me when preparing my Report.

4. In regard to the mixed trains advocated by the Chamber, it would appear that they are not aware of the objections to such a mode of carrying on the traffic, that they are also unaware of, or have overlooked, the fact of its costing more to move their goods at 20 miles an hour than 10; and that, however convenient it may be to one or two individuals to have a second train in a day, it is possible—if not, as I believe, certain—that, at the present passenger charges, there would not be a sufficient addition of traffic created by the second train, to compensate for the mischief done by carrying the goods at high speed, and for the risk and discomfort in conveying passengers and goods together.

5. If the passenger rates are reduced, as I propose, a large increase in the passenger traffic will follow, and at least one more daily train be necessary; and the convenience now sought for by the Chamber will be provided without so palpable an infringement of a fundamental principle, as the running of mixed trains at high speed.

I have, &c.,

(Signed) T. T. PEARS,

Consulting Engineer for Railways.

Madras, 3rd July 1857.

FINANCIAL RAILWAY DEPARTMENT.

No. 362.

Extract from the Minutes of Consultation, Dated 24th July 1857.

Read Report of the Consulting Engineer for Railways on a letter from the Agent and Manager of the Railway Company.

On the subject of a revision of the Rates and Fares for Passengers and Goods on the Madras Railway. } Here enter 2nd July 1857.

Read also the following letter and Memo: from the Consulting Engineer.

(Here enter 3rd and 8th July 1857, No. 245.)

1. In the first of the communications above recorded, the Consulting Engineer submits, with his observations, a letter from the Agent and Manager of the Railway Company, and the papers connected with it, on the subject of the classification of Goods and the revision of the present scale of charges, for the conveyance of Passengers and Goods, on the Madras Railway.

2. The important questions, of which these papers treat, are so fully discussed in the report of the Consulting Engineer, that the Government deem it unnecessary, in this place, to enter into any detailed notice of the propositions submitted by the Railway Authorities and Colonel Pears, and of the arguments on which they are founded.

It will be sufficient to observe that the views taken, and the course proposed, by the Railway Officers and the Consulting Engineer, are directly opposed to each other-based upon totally different views of the same question.

3. In the correspondence, which has already passed, with the Honorable the Court of Directors on the subject of the Rates and Fares for the Railway here, the Government have repeatedly expressed their entire concurrence in the principles on which Colonel Pears' reasoning is founded; they do not think it necessary, therefore, to do more, on the present occasion, than to forward the whole correspondence to the Honorable Court, and to recommend that, as suggested by Colonel Pears, it may be laid before men conversant with such matters and unprejudiced, in view to their opinions being obtained before arriving at a final decision on the question.

4. In the mean while, as the views of the Government and of the Railway Authorities are so utterly at variance, the Governor in Council considers that the best course to pursue would be to leave the present Rates and Fares in force, until the questions can be fully discussed and finally determined by the Honorable Court and the Board of Directors of the Railway Company.

5. It is resolved also to forward copies of the papers recorded at the head of these proceedings to the Government of India for their consideration.

(True Extract)

E. MALTBY,

Acting Chief Secretary.

MEMORANDUM.

From the Report in the Railway Department Board of Trade for 1855—In England and Wales.

England and Wales.—The average fare of 1st Class was reduced from 2·11*d.* per mile in 1852 to 2·09*d.* in 1855.

The receipt per passenger decreased from 54·96*d.*, in the former year, to 44·88*d.* in 1855, but the receipt per mile, the great point, increased from 379£ to 400£.

The 3rd Class fare was reduced from 0·87*d.* in 1852, to 0·86*d.* in 1855.

The receipt "per passenger" fell from 12·48*d.* to 12*d.* in 1855, but the receipt per mile increased largely, i. e. from £350, to £423.

Scotland.—In Scotland the only instance, in which the same results are not shown, was in the following. The second class fares were reduced from 1·51*d.* in 1852, to 1·43*d.* in 1855, and the receipt per mile fell from 177£ to 145£, but there had been at the same time a very large reduction in the charge for 1st class, followed by an increase in the receipt per mile for that class. Of this Captain Galton says "This "diminution of receipts may perhaps be due to the fact that there is "very little difference between the average fare per mile for 1st and "2nd class passengers, and a great difference between the average fare of "second and 3rd class passengers," and elsewhere, "the fares at which "3rd class passengers in England and Scotland have been carried have "also been reduced; the average distance travelled by this class does "not however appear to have diminished; but the receipts per mile "have largely increased."

Ireland.—In Ireland we find the following experiments and results :

Class.	Fares in 1852.	Fares in 1855.	Difference.	Receipt per passenger. 1852	Receipt per passenger. 1855	Difference.	Receipt per mile. 1852	Receipt per mile. 1855	Difference.
	D.			D.	D.	D.			
1st.	1·72	1·71	—·01	36·48	35·28	—1·20	150	144	— 6£
2nd.	1·31	1·39	+·08	16·56	18·00	+1·44	245	232	—13£
3rd.	0·82	0·89	+·07	12·24	14·88	+2·64	259	224	—35£

These facts are very instructive ; they show that, as a general rule, a rise in the fares was followed by a reduction in the aggregate receipt per mile of Railway. In all cases but one, wherein the fares were reduced, the receipt per passenger, as a matter of course, fell, but the aggregate receipts increased, as a consequence of the large increase in the number booked. Of such experience Captain Galton writes.

" In Ireland the average fare per mile and the receipts of 1st Class passengers have not varied much, the fare of 2nd and 3rd Class passengers and the receipts per passenger appear to have been increased ; but the receipts per mile have diminished."

(Signed) T. T. PEARS,
Consulting Engineer for Railways.

July 8th, 1857.

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